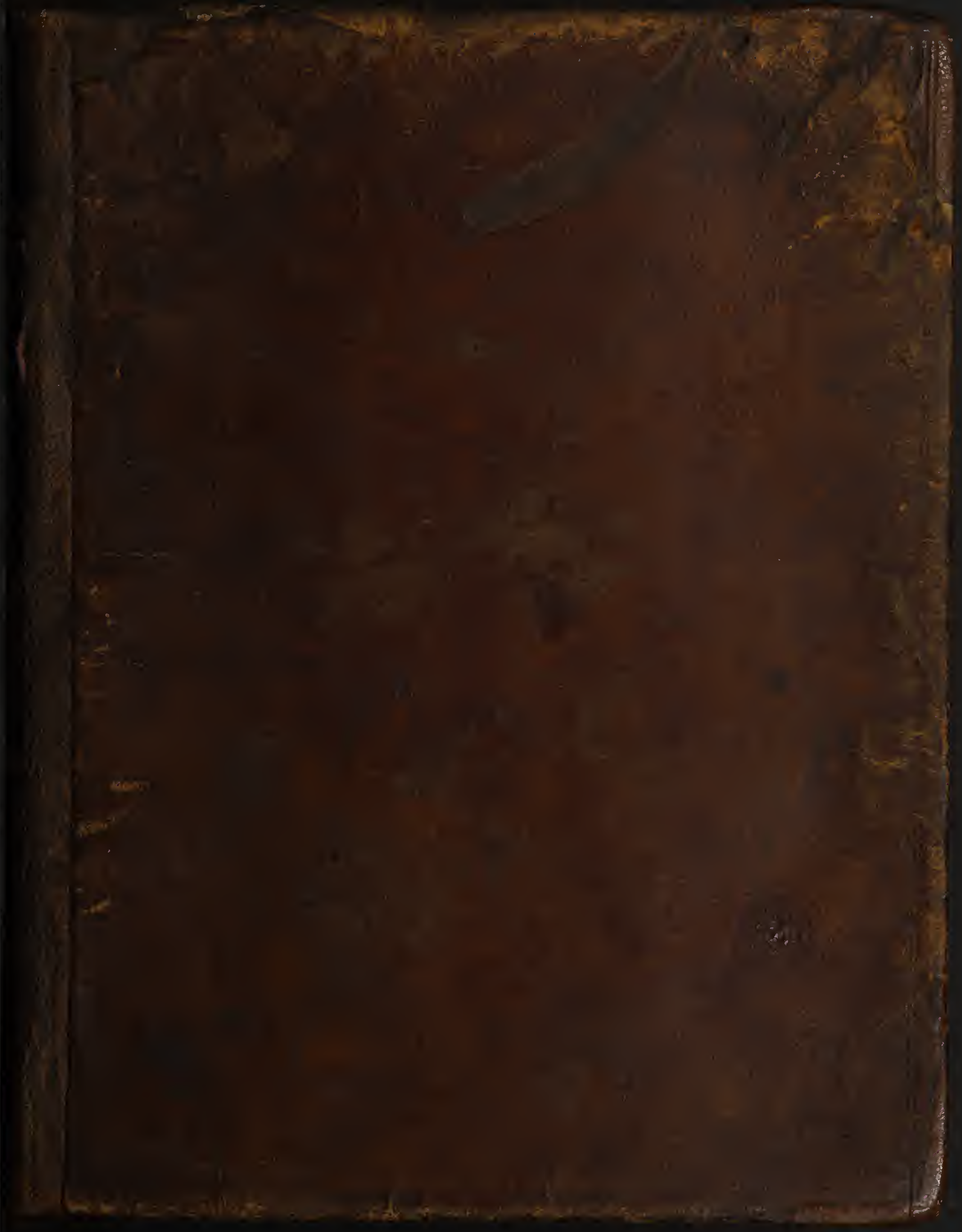


STUBBE

A BACON-FACE

NO

BEAUTY

1671







XVI 2.

63287/B

MEDICAL SOCIETY OF LONDON

The Library of the
Wellcome Institute for
the History of Medicine

MEDICAL SOCIETY
OF
LONDON
DEPOSIT

Accession Number

Press Mark

STUBBE, H.

XVI 2.

* Author of a Famous Treatise on Chocolate—

XVI 2

LONDON MEDICAL SOCIETY

A Bacon-Face NO BEAUTY,

OR, A

REPLY

TO

GEORGE THOMSON,

Pretender to

Phyſick and Chymiſtry.

Whereunto is added,

A Defence of PHLEBOTOMY

In general, and alſo particularly

In the {PLAGUE, SMALL-POX, {SCURVEY, and PLEURISIE.

In oppoſition to the ſame Author, and the Author of *Medela Medicinæ*, Doctor *Whitaker*, and Doctor *Sydenham*.

ALSO

A Relation concerning the ſtrange Symptomes happening upon the Bite of an ADDER.

AND

A Reply, by way of Preface to the Calumnies of *Eccebolius Glanvile*.

By *Henry Stubbe* Phyſician at *Warwick*.

Nec temerè nec timidè.

London, Printed in the Year 1671.

BEVME

TO THE

Glory of His PROFESSION,

THE

Ornament of this NATION,

AND

His most Honoured Friend,

Sir *ALEXANDER FRASIER*, Knight,

Principal Physician to His

MAJESTY.

SIR,

WEre it the *Mode* of *this Age* to conferre *Divine worship* upon *Physicians*, or to erect them *publick Memorials*, more Countries than *England* would be **your Idolaters**, and be-

 sides,

sides what an infinite number of the *Nobility* and *Gentry* would *honour* you with, our *Royal Sovereign* would erect a **Statue** to you, as the *Ancients* did to *Æsculapius* and *Higia*, PRO SALUTE SUA ET SUORUM. 'Tis in your *Happy Practise* that we see what *perfection* great **Learning and long Experience** can advance a **consummate judgement** unto: The most *unlimited* desires whereunto *Ambition* can transport any of *our Faculty*, are but to equal Doctor *FRASIER*. So much *we* may *think* of: So much *we* may *wish* for: But we must reckon *those thoughts* amongst *our extravagancies*, and despair as much of atchieving *them*, as the *greatest impossibilities*: I do avow it in despite of *Envy*, *Malice* and *Ignorance*, that the discovery of the *Longitude*, or *North-west passage*, is a more *feasible design*. These are not the *customary Complements* of a **Dedication**:

tion: Whoſoever apprehends that *I can flatter*, underſtands not *me:* and He is unacquainted with *Your worth*, who imagines You can be flattered herein. The *judgment* of the moſt intelligent Prince that ever ſwayed the *Engliſh* Scepter hath put an end to all *ſuſpicions* of this nature; and *His Illuſtrious Elogy* hath rendered all *Panegyriques* needleſs unto you. I profeſs I ſhould condemn my ſelf as *intolerably criminal*, ſhould I *ſurmiſe* that any *Addreſs* from *me* could add to *Your Glory*: But *thoſe* who receive no *Acceſſionals* from our *Applications*, and *Praiſes*, do *notwithſtanding* permit us thereby to teſtifie our *Reſpects* and *Gratitude*: And I beſeech you to believe that the *preſumptuous Declarations* of theſe *Truths*, is the reſult of *thoſe Sentiments*. I eſteem it amongſt the *peculiar Felicities* of my *Life*, to have been *favoured* by a Perſon of ſo *tranſcen-*

dent

dent Merit, and who diſpoſeth not of his Kindneſs promiſcuouſly: I am redevable unto *You* for ſome place in the *regards* of his **Sacred Majeſty**, and for ſome *Effects* of his **Royal Bounty**: 'Twas the *Character* You gave of *me*, which procured me that *Employment*, in which I was deſigned HIS MAJESTIES PHYSICIAN IN THE ISLAND OF *JAMAICA*. Sickneſs did *there* incapacitate *me* from acknowledging that *Heroical* Generoſity of *my Prince* with any *conſiderable Service*; But *I* ſhall alwayes retain a *due ſenſe* for what **He hath done**, as well as for what **He hath pardoned**; and this ſhall ever be an *incentive* unto *me* ſo to qualifie *my ſelf*, that *I* may be able to repay **Him** all that **Loyalty** to *my* KING, and *obligation* to my PATRON can require.

Amidſt

The Epiſtle Decatory.

Amidſt *theſe Proteſtations*, give me leave to tell Sir *ALEXANDER FRASIER*, that I am not now ſo *esloigned from the World*, nor ſo fixed on my *retirement*, as that it is *indifferent* unto me whether **He** continue *Me* a place in **His Memory**: 'Tis certain *You* afford *no room* there to what is *vulgar*, and *trivial*: yet *I* cannot but beg to be *indulged* in the **vanity** of this requeſt: and *I* aſſure **You** *I* bring no *common inclinations* to ſerve **You**, neither would *I* by **ordinary Teſtimonies** expreſs that paſſion wherewith *I* am,

Warwick Febr. 14. 1670.

SIR,

Your moſt humble

and moſt devoted Servant,

Henry Stubbe.

A PREFACE To The READER.

ABout Christmas, *I was earnestly pressed by some Persons of* Great Learning, *and of no* Common Repute, *to make some Reply unto*----- G. Thomson; *not only to chastise his Insolence towards* me, *(for which he had made* me Sufficient Reparation *by his* Postscript *against* D. M.) *but to punish him for the Indignities he had put upon my* **Faculty**. *Having finished that Treatise,* I *was importuned to write something about* Phlebotomy, *since* he *had made such a clamour about it against the* Colledge, *and that this Point had not been handled by the Adversaries of* M.N. *how necessary soever he had rendered it by the Publication of* **Medela Medicine.** *The Request seemed very* Just, *but how* I *should be able to perform the Undertaking to* my own Satisfaction, *or that of others,* I *knew not: For* this Age *seemed so to have charged the* Methods of Ratiocination, *& so altered the Principles of* Physick *and* Philosophy, *that for a man to argue as our* best Writers *do, were to subject the Case to all manner of* Scorn *and* Contempt: *And how I should reduce the* Phænomena *which are* undeniably *consequential to* Plebotomy, *under one* plausible *Hypothesis, I did not well comprehend: For* I *had no* Collections *upon the* Subject *(indeed* I *never made any in my life upon any, but remit all to the strength of my* Memory, *and that now declines) nor had* I *ever framed to my self any* Idea *of things that might* accomplish *me thereunto: Though* I *have for sundry Years been contriving some*

Materials *in order to it : And had* ſeriouſly *gone about it, but that my Conteſts with the* Virtuoſi *have diverted me, and the* Troubles *and* Dangers *they have ever ſince alarm'd me with (even to the hazard of my* Life, *and* Fortunes) *made me unwilling to* begin *what I ſhould never have opportunity to* conclude. *However, ſince* they *were pleaſed to have ſome Opinion of* my Abilities, *and promiſed to acquieſce in what I could do under ſo* little Leyſure, *as my Practice affords me, and ſo great* Diſadvantages *as my Diſfurniſhments created me; I did ſubmit to the* Task. *And thou haſt here, Reader, what my* Thoughts *could* Recollect *and* Digeſt *in the Space of a few Weeks, and thoſe Interrupted with* other buſineſſes, *amidſt ſo ſlender a* Library *as mine is; the* Defects *whereof, I could not ſupply any wayes, many of the* Books *which I would have made uſe of (and which I loſt by the late* Fire) *being not to be found in any* Library, *or bought in* England : *So much decayed is the* Trade of Book-ſelling, *together with the preſent* Declination of all Learning. *If,* **to have refuted my Adverſaries,** *be all that thou expecteſt, I have done it* perſpicuouſly, *and* fully : *If thou look'ſt for a* compleat Hypotheſis *in defence of the* Phyſicians Practice, *I acknowledg the preſent* Treatiſe *to be* deficient. *For, as to the* **Nature of the Blood,** *though I have made many* Eſſays *in reference to the diſcovery* thereof, *yet one* Inquiry *hath ſo multiplied others, and there is ſuch a* variation *thereof not only in* Individuals, *but according to the* Seaſons and Seaſonableneſs of the Years; *that I am better able to* convince others of their Errours, *than to* demonſtrate other Principles : *Something I have done in order* thereunto; *and ſome things I could have* further proſecuted, *but* would not : *For I have no mind to inſtruct others* too far : *Let them ſtudy (or, to ſpeak in the Dialect of my* Enemies, *let them Read* Index's) *as I have done : To what purpoſe ſhould I* add ſtrength to thoſe Fetters *which are preparing for my* **Faculty?** *Or prejudice* Learning, *by qualifying a ſort of* Ignorant, Idle, Talkative-Inſolents, *to maintain* Converſation *in any Company! If I could ſee that the* Parliament *would, in purſuance of the* Prudent Laws *made by our* Anceſtors, *regulate our* Faculty *according to* Real Policy, *and the* Precedents *of the* beſt Governments, *I would not only Contribute all I could to the* publique Utility, *but propoſe* ſuch a Deſigne, *as ſhould add more to the* Advancement of Uſeful Knowledg, *and that* Learning, *which is neceſſary to the Support of this* Monarchy, *as no Age did ever parallel; which ſhould be* **Facile, Practicable;** *and the Effects thereof, ſhould be more* **Viſible** *in* **three Years,** *than* **theirs** *have been; who boaſt that* they have done more in **ſix Years,**

Years, than the Aristotelians in more than thrice so many Centuries. *But let* these men *have* their Desires; *Let* them be loaded (*according to their own Overtures*) with all that contempt which is usually the Reward of vain and unprofitable Professors. *Plus ultra*. p. 8.

I cannot but look upon it as a singular Act of Providence, *that I should fix upon the* present Title *of* this Book; *and direct my* Censure *against the Lord* Bacon, *and those that pretend to be* Followers of Him *in Philosophy*; *seeing that it hath happened so, as that* Ecebolius Glanvil *hath made use of that* Great Name, *to excuse his* Errours *and* Insolence; *and thinks it a sufficient Apology,* If he can shew that the substance of his most Obnoxious Periods and Passages, are to be found largely, and often insisted on by so Great, Learned, and Wise a man, as my Lord Bacon. *Which* defence, *though it be* no other *than he might* make, *who should tender us* a wrong Account of the Sweating-Sickness; *or* avowe *that* Coffi *were* Narcotical; *or obtrude upon us a* thousand Falsities *out of the* Philosophical *Writings of that* Lord, *and* Lawyer; *yet doth it seem requisite that I should say something more in reference to* his Authority, *lest, what imported little* in the Age when he lived, *should be* prejudicial, *and* destructive *to that which* succeeds. *I will not deny that he was a man of* good Literature, *and* great Eloquence, *accompanied with a* popular, *and* florid way of Expressing himself: *By Profession, he was a* Lawyer, *and the principal part of* his Studies *were bent* that way; *and although* therein *he were surpassed by* others, *yet 'tis* there *that his* Credit *must seem most* Authentick, *or no where: We acknowledg no* Chancellours of Philosophy, Philology, Medicine, &c. *Nor do* Artists *suffer themselves to be* over-swayed *by the judgments of men, that are either totally unacquainted, or have but* transitorily, *and* superficially *looked into the* Subjects they treat of. *No* Law *ever made him* our Dictator, *nor is there any* Reason *that concludes him* Infallible: *Nay, it is manifest that he was frequently* deceived. *And, since the* Gardiners *have* protested against him, *and that* justly: *Since the* Chymists, *and the* Mathematicians *disclaim him: Why may not a* Physician *refuse to be tried* by Him? *Not that* this *doth introduce a Comparison of Abilities* in general, *but of knowledg* in particular Cases; *and the World hath always allowed, that* A Person, otherwise Ignorant, even a Fool, may know more in his own House, than a Wise man doth in another's. *Besides, I hope* my Adversaries *will permit me to retort upon the* Lord Bacon, *what they* (*though most injuriously*) *urge against* Aristotle; In his Letter to *M.S.* p. 8.

See M. *Austens* Observations on his *Natural History*.

See the Letter against *Aristotle* at the end of *Scepsis Scientifica*, p. 90.

Gotle: *And to propose it to their judgment,* "Whether 'twas likely that my *Lord Bacon* was so far beyond other Scholars in his "*Intellectuals*, as these latter Times have presumed; when *He* "came so far short of most of them in *his Morals? I* believe "there is a near Connexion between *Truth* and *Goodness*, and "there's a *Taste* in the Soul, whereby it relisheth *Truth*, as the "Palate *Meats*; which sense and gusto *vice* depraves and viti-"ates. So that, though *Wit* may make the vicious *cunning Sophisters*, and *subtile Atheists*; *I* doubt, seldom the most *exercised Philosophers*.

I shall not prove this Charge *by alledging Writers who were* not Born *till above* many Centuries; *Nay*, above a thousand Years *after: Such is* Suidas, (*who is* very Fabulous) *and S.* Jerome. *Nor impose upon my Reader* Authors *who write quite contrary to what is to be averred*; *as* (a) Aristocles, *and* Arrian: *Nor represent as* befitting Witnesses, *a company of* Buffoons, *and* notorious Lyers, *such was* Timæus: *But refer you to the* Common Opinion *about Passages within the* Memory of man, *and to his* Accusations in Parliament (*which are* Recorded): *and since* He *durst not stand the* Trial, *but cast himself upon the* Mercy of the House; *his condition admits of* **no Vindication**; *and I again retort the Words of* Ecebolius *upon him*: "Thus then you see an ill Character of the "*Lord* Bacon's *manners* from *dis-interested Authorities*; on con-"sideration of which, 'tis to me matter of some Wonder, that the "Memory of the *vitious* should be so *blessed*, and his Authority "so Irreproveable.—— *But to pass by* this Argument, *which I confess to have been* Weak, *when first urged*; *but is* Strong, *when it is* retorted: *I do say, that the* Credit of no man is such, as ought to sway us against manifest Experience; *and if* Aristotle *teach me that what is most* **Rationally insisted on,** *if it be* **Sensually refuted,** *cannot be adhered unto without an* Imbecillity of Judgment: *I am to be pardoned, if I submit not to the* **Inartificial Argument** *of my Lord* Bacon's *Authority, when his Assertion is* **apparently False:** *And so it is in more Cases than that of the* **Sweating-Sickness.** *So it is in that Saying of his* (*so pressed by* Ecebolius) *that* he never names any ancient Author, but to Confute, or Reprove him: *For he cites an* hundred *Authors* in his Works *by way of* Illustration; *makes an* Honourable *mention of* Hippocrates, *and* **no where** *reproveth him. Not to relate the* Altar *and* Inscription *which he erected to* Plato; *and other Instances that might be made of his mentioning* Ancient Writers *in places where he no way* disparageth them, *nor Animadverts* upon them. *So it is in the places*

(a) See the Words of *Aristocles* in *Casaubon*'s Notes upon the fifth Book of *Diogenes Laertius*: In the Edition of *Menagius*, p. 41. 42.

(b) See *Menagius*'s Notes on *Laertius*, lib. 5. p. 110. and *Jonsius*, l. 2. c. 2. p. 125.

Uti supra, p. 91.

Uti supra, p. 84.

Aristotel. polit. l. 7. c. 4.

places alledged now *by* Ecebolius. *For if it be evident*, Ariſtotle *did reſolve his Philoſophy* finally *into* **Senſe**: *If it be evident, that* Ariſtotle *did propoſe, and purſue an* **Hiſtory of Nature** (*which was carried on by his* Succeſſors, *as* Theophraſtus, Eraſiſtratus, Herophilus, *and others*) *and eſteemed no* Univerſal Propoſitions *to be* true, *but what are* verified in every Individual (*which is the* Foundation *of all he Writes about the* Art of Reaſoning:) *If it be evident that the* Glorious Body of Phyſick *which we now poſſeſs, was principally erected upon* his Phyſiology *and* Deductions (*which he that Reads* Galen, Mercatus, *or* Fernelius, *may ſee*) *and our* Practice *is not only regulated* happily *thereby as to* known Diſeaſes, *but directed in order to the Diſcovery of* New Medicaments, *and the* Cure of New Diſeaſes, (*not to mention the* Natural *Improvements*): *If theſe things are* evident (*which* **no Scholar can deny**) *what* Truth *can there be in* thoſe Citations *or* Aphoriſms *of my Lord* Bacon, *ſo much enforced againſt me by* Ecebolius *in his late* Letter? *What doth* he *bring but freſh* Teſtimonies *of his intolerable* Impudence *and* Ignorance, *and create new* Umbrages *upon that* Lord, *when he recites an* egregious miſtake *of His?* P. 9. 10.

"Si----- "id minime eventurum fuiſſet, quod per annos bis mille jam fieri "videmus: Nempe ut Scientiæ **ſuis hæreant veſtigiis,** & in **eo-** "**dem** fere **Statu** maneant, neq; **augmentum** aliquod memora- "bile ſumſerunt; quin potius **in primo Authore** maxime floruerint, "& **deinceps declinaverint.** Nov. Organ. Aphor. v. 74.

This being ſaid of the **Sciences** *in general, is an* **Inſufferable Untruth**: *For who knows not the large* Improvements *that the* Mathematicks *received by* **Euclid** (*who lived after* Ariſtotle) *and others, Who had then advanced every part of the* pure *and* mixt Mathematicks *long before the* Verulamian *Philoſopher writ* this? *Who knows not, how* Herbary *had been improved by* Theophraſtus, Dioſcorides, *the* Arabians, *and other* Peripateticks, *in like manner? Who can deny that* Phyſick (*in every part of it*) *and particularly* Anatomy *was improved by* Eraſiſtratus, Herophilus, Galen, Veſalius, Fallopius, *&c. before the Lord* Bacon *ever ſucked? And what* acceſſionalls *had* Chymiſtry *received by the cultivation of the* Ariſtotelians, *before that the* **Houſe of Solomon** *was dreamed of, or the* **New Atlantis** *diſcovered? Let us therefore not be concluded by the* **Aphoriſms** *of this* **Lord**: *Let us not take his* Aſſertions *for* Legitimate Proofs: *Let* theſe *inſulſe* Adherents *of his buy ſome Salt, and make uſe of more than* **one Grain** *when they Read* **Him**: *And let us believe better of the* Ancients *than that their* Phyſiology *advanced* **nothing**; *or that Their* **Methods of Science** are ſo unfruitful, as

in so many Centuries not to have brought the World so much **Practical beneficial Knowledg,** *as would help towards the* **Cure of a Cut-Finger.** *Because the* petulancy *of my* Adversary *doth enforce me thereunto, I do* **declare,** *that the Lord* Bacon *did steal the* principal *part of his* **Novum Organum** *out of* **Aristotle,** *and only disguised* his Suggestions *in a new* Mode *and* Dress; *As he likewise borrowed the best* Rudiments *of his* **Advancement of Learning** *from* **Ludovicus Vives** de causis corruptarum Artium; *What was his* House of Solomon, *but the* Ectype *or* Transcript *of the* Peripateticks *establishment at* Alexandria *in the* Musæum *of* Ptolemæus Layides, *and* Demetrius Phalereus? *'Tis by* his great Example *that the* Baconical Philosophers *are such* Plagiaries, *and* Relators of false and defective Experiments; Contemners of the Ancients, *and* opinionated concerning themselves. *The only judgment I can make of my Lord* Bacon's *Actings, is, that being so* Flagitious, *and so* Ignominiously degraded: *He determined to redeem the* **Infamy** *of his* past Life *by amusing the World with* **New Projects;** *and to gain a* **Chancellourship** *in* Literature, *when he was excluded from that on the* Bench: *And to revenge himself of the* Nation *whom* He *had exasperated, by diffusing* Heresies in Philosophy, *and creating in the Breasts of the* English *such a desire of* Novelty, *as rose up to a Contempt of the Ancient Ecclesiastical and* Civil Jurisdiction, *and the* Old Government, *as well as* Governours *of the Realm: And the* Root *of all our* present Distractions *was planted by* **His Hand.**

The mention of Ecebolius Glanvill *seems to give me just occasion to digress* here, *and to give my* Reader *some Account of his late* virulent *Books against* Me. *I gave him no Occasion for to Write in* **that manner;** *nor did I Transgress the* Act of Indemnity and Oblivion *to depreciate the* Virtuosi, *though* they *were much more* obnoxious *than I: Whereas* He, *to accomplish a* Revenge, *doth begin with the* Breach of Divine and Humane Laws: *The* Penalty *in the* Act of Oblivion *determined after* three Years; *but the* Command *is no less than* **Utter Oblivion:** *So run the Words of the* **Act.** *The* Rector *of* Bathe *tells me that,* "If I think **so** in earnest, the **Law** is open; I may take my Course.—— *But this* **Divine** *might have known, that there are more* Injuries, *more* Sins, *than the* Temporal Laws *prescribe a* Punishment *for: And that the* Obligation *of the* Law *doth not depend upon it's having a* Penalty *annexed. The* Commandment *of the* Sabbath *was given, and the* Violation *thereof, a* Sin; *and he that had* gathered Sticks

P. 4.

thereupon

thereupon was apprehended, and put into Ward, till God *should determine* how he should be punished. *Is not this a fit Person to be entrusted with the* **Cure of Souls**! *But to pass by* **His Impiety**, *and proceed to his* Indiscretion; *Is it not* extraordinary, *that He should upbraid me with adhearing to* my Patron *out of* **Gratitude**, *when He complied with the* Same Parties *out of* **Interest**, *and to advantage* Himself? *I could trace the* Saint *from* Excester-*Colledg to Mr.* Rouse's; *and the L.—— W.'s, and from the* Rota *of Mr.* Harrington, *unto the Lord* Mayor's *Pulpit, when he Preached the Sermon about* **Catholick Charity**. *What* Prayers, *what* Graces *he uttered in* those Families? *'tis easie to conjecture that they transcended a* Negative Loyalty. *But as for his* Abettours, *I have seen one of them* Sneaking *at Sir* H. V.'s. *He was* Tutour *to his* Nephew, *and* **Intelligencer** *during all the late* Usurpations. *He saith, He blames me not for* Writing *against Doctor* J. W. *but for treating him so* opprobriously. *I answer, that I gave him such Language as his* Ignorance (*in those Questions*) *did deserve: And I refer my self to all the* Royallists, *if* any Language *could be* Malicious *and* Scurrilous, *which was used against the* Sub-Scribe *to the Tribe of* Adoniram, *who had been an* Active Preacher *in the first War, and* Decyphered (*besides others, to the Ruine of many Loyal Persons*) *the* King's Cabinet *taken at* Naseby, *and, as a* Monument *of his Noble Performances in behalf of the* **Cause**, *deposited the* Original, *with the* Decyphering, *in the* Publique Library *at* Oxford? *As for Mr.* R. B. *who writ the* Holy Common-Wealth, *and the* Key for Catholicks: *He having* reviled *on, and* belyed *my* Patron, (*as he did also the* Church *of* England) *and refuted his* Notorious Lyes, *and discovered the* Ignorance *of a Man who* (*till then*) *had in the Nation some Esteem for* Learning; *If this was not a* considerable Service *to the* **King** *and* **Episcopacy**, *I understand nothing*: *And though I did not* intend it as such (*which I yield*) *yet they are so* generous *and* just, *as to distinguish betwixt those who* (*though* Undesignedly) *served them, and those that did all they could to* **Destroy them.** *The* Key for Catholicks *is Unrepented of; and I recommend* that Book *to the Perusal of the* Episcoparians, *and let* them *judg whether* He that writ it, *or* He that oppos'd it (*though in defence of Sir.* H. V.) *and pleaded earnestly for an* Indulgence towards them in the Liturgical way, *deserved best at* their Hands? * *I say, I* **could not abuse Mr.** R. B. **in those**

Numbers 15. 32, 33, 34.

P. 5. 6.

* Take notice that the *Pia Philosophia*, and the *Prefatory* Discourse against me, came out *both together*, and were sent to me *Bound together*; So that I may be excused for *mixing* the *Elogies* bestowed upon Mr. *R. B.*

Dayes;

Dayes: *And I caſt my ſelf upon the* **Royallists** *for my* Judges; *What ſay yee* **Gentlemen**? *Was* **He** the only Man that ſpoke Senſe in the Age of Non-ſenſe? *Was He* **Reverend, Learned,** *and* **Ingenious**? *But, What is it that* Ecebolius *doth purpoſe to* himſelf? *Would* He *overthrow* all our Laws *as well as the* Act of Oblivion? *Why doth* He *now careſſe* **this Party** *ſo highly! He adds, That* 'tis to be hoped there are not any more Criminal than
P. 5. I on this ſide *Charing-Croſs*, *Tyburn*. or *Tower-Hill*. *Is not this all one, as to bid* Derrick *take the* **Authour** *and* **Approver of the Pindarick Ode**! *Is it not to* Sentence unto Death *the* Actours of the firſt War (*'tis well* **his Patron** *Mr.* Rouſe *is dead*) *the* Trooping *Divines, the* Decipherer of his Majeſtie's Letters, *the Followers of* Oliver, *and King* Dick, *not to mention others*? *The truth is,* **O moſt generous and candid Royallists,** *being a* **Poor** *Boy at* Weſtminſter-School (*as my Reverend Maſter, Dr.* Busby *can tell you*) *aged about* Ten years old (*there are but* few years *difference betwixt* my Age *and that of* Ecebolius) *Sir* H. V. *caſually coming to* School *with Dr.* Osbolſton, *did take a kindneſs to* me; *and frequently relieved me with* Money, *preferred me to be a* King's Scholar *firſt, and afterwards to* Oxford: *At ſuch times as I had convenience, I had the liberty to reſort to* his Houſe, *and fill that* Belly, *which* otherwiſe, *had* no Suſtenance *but what* **one Penny** *could purchaſe for my* Dinner: *I had not any* Breakfaſt, *except I got it by making ſome bodies* Exerciſe. *My* Mother *had two of us to maintain by her* Needle *at* London, *after* we had Travelled on Foot *from* Leverpool *thither. I was not a little obliged to the* Charity *of my good* Maſter, *for Money to buy* Books, *and* Cloathes, *beſides that* He *gave me my* **Schooling.** *I was ſent to* Oxford *after the late* King *was* **Beheaded,** *being aged about* Seventeen, *and very* Little of Stature. *The* Quarrels, *and* Animoſities *growing high betwixt the* Presbyterians *and Sir* H. V's. *Friends, I ſided with* him. *Was it,* Generous Sirs, *any* Faction *in me, or the Teſtimony of a* Factious Spirit *to oppoſe the* **Presbyterians**? *or, was it a* Crime **then** *to ſerve my* Patron? *Twice I with* Tears *implored the Protection of Sir* H. V. *and* C. L. *to ſave* Weſtminſter-School (*that great and known* Seminary *of* Royallists) *from that* Deſtruction *which the* Presbyterians, *and* Independents *menaced it with: And my* Maſter *ſhall witneſſe how I interceded for* **Him.** *'Twas I brought the* **Engagement** *down to* Oxford (*though I took it not; being an* Under-Graduate) *and having got Doctor* S. F. *and Doctor* R. *to be turned out,* I ſaved the remains of the Cavaliers *in* Chriſt-Church, *and* Queens Colledg, *and gave* them

them *an opportunity to* live ſecurely, *and Educate* others *in* their Principles. *All the retribution I could make to my* generous Patron, *for gratifying a* poor Stripling, *and permitting* him *to be* Grateful, *was, To promiſe,* if ever I were able, *to ſerve* him *effectually. Which I did (maugre the* Power *and* Greatneſs *of the* Preſbyterians) *in oppoſing Doctor* J. W. *who was* then *the* Glory *and* Pride *of that Party. Afterwards, to terrifie the* **Presbyterians,** *and make them more* Complacential, *I writ thoſe ſo* Invidious Queries; *yet withall, proteſted that they* **contain no Tenets of mine,** (*for I knew* they *were not* defenſible *againſt the* **Learned** *and* **Judicious** Epiſcoparians: *Though they had* force *and* addreſs *enough againſt the* more Ignorant *Presbyterians) but were* writ *to excuſe thoſe who had made thoſe to be* their Aſſertions, *which were* **my Doubts.** *This I declared in the* Preface: *yet would not* Ecebolius *take notice* thereof, *to the end I might ſeem more* **Odious,** *and that I might be upbraided with* **contradicting my ſelf:** *Which I am very glad* I doe: *And that my* Principles *(if thoſe be* them *) are as much* changed *as my* Hair. *In fine, (for I would not be tedious about theſe* Impertinences) *whatſoever I writ, was againſt the* **Presbyterian Clergy,** *the* **Presbyterian Universities,** *the* Uſurpations *of* **Oliver** *and* **Richard.** *Againſt his* Majeſty, *or his* Father, *or the Church of* England, *there is ſo little* expreſly, *that leſs could not be ſaid by* **One of that ſide:** *And* to have had any one ſo Active in thoſe times, and to do what I did, *'tis not to be doubted but* his Majeſty *would have* diſpenſed *with it, and acknowledged my* **Serviceableneſs.** *Could I but aſſume the* Impudence *of thoſe* **Cromwellians** *and* **Renegadoes,** *and tell you* Renegadoes, *I did* all this *for to* **facilitate the Kings returne,** *how* plauſible *would it ſeem? But though I knew the* tendency *thereof, I ſcorn to ſay,* **This was my Deſigne:** *I ſay,* **I ſerved my Patron** *therein; and bore no* **Malice** *to the* **Royalliſts,** *who were* then *Ejected out of the* Univerſities, *& all* Churches. *Had I not contributed to* thoſe Imbroylments, *perhaps* things had not been in the ſame condition as they are in now; *And* Ecebolius (*as well as others my* moſt bitter *Adverſaries*) *had been* **Praying,** *and* **Preaching,** *as before: I prepared thoſe* **Algerines** *to* repent, *and to* Conforme; *and* **you** *may, if* you *pleaſe, put the* Latitudinarians (*upon whom neither* Religion, Morality, *or* Generoſity *have any Obligation) into a condition to betray* **You** *again. In the* mean time, *I beſeech* you, Generous Epiſcoparians, *not to make your ſelves* **Inſtruments for their Rage,** *nor ſuffer them* **by your Means** *to revenge upon* me *the Affronts done to the* **Presbyteri-**

ans,

ans, Oliver, *and* Richard Cromwell: *Think not that* they *love* you, *or the* Government: *Nothing is dear to* them *but* themselves: *Nor are they swayed by any thing but* Interest *and* Ambition: *They attend to* Opportunities, *not* Principles; *and value not* Right, *but* Fortune *and* Power. *If* they *make it a* **Malignity of Temper** *in* me, *to have reviled* (**in those dayes**) *Doctor* J. W. *and Mr.* R. B. *If it be* **Hypocrisie** *to defend the* Monarchy, Religion, *and* Universities *of this Nation*: **What Bottom do you stand on?** *Or,* **How do you expect to be served?** *Mr.* R. B. *in his* Saints everlasting Rest, (*not to mention his* Key for Catholicks) *hath transferred Mr.* Pym, *and* Hambden *into* Heaven: *And* Ecebolius *tells you, that* 'tis *to be hoped, that on this side* Tyburne *there is not* **one whose Crimes have transcended mine**: *Thus 'tis made a* **more hainous Fault** *to have opposed the* **Rigid Presbyterians,** Oliver, *and* Richard Cromwell, *than to have acted in the* **First War,** *to have* **brought the late King to the Block,** *or to have* **cut off his Head.** *Sir* H. V. *was no* Regicide: *I was not concerned* in all those times: *I never made any* Application *or* Poem *to the Renowned Prince* **Oliver,** *nor insinuated my self into the Court of* **Him,** *or* **his Son.** *When it pleased Almighty God to restore* so happily *his Majesty*; *I made* early *and* voluntary *Applications to the* Bishop *of* **Winton** (*that now is*), *for his* Protection *in my* Retirement, *assuring his* Lordship *of an inviolate* **Passive Obedience,** *which was all I* could *or* would *pay till the* **Covenant** *were renounced: He hath it* under my Hand, *and* higher streins *than* these. *I need not recite either the* Kindnesses *of that* Reverend Prelate *unto me, or his* Majesties Favours *at my going to* Jamaica: *'Tis enough to say, that* **I was not deceived in the Opinion I always had concerning the Generosity of the Royalists.** *When the* Restoration of the Bishops, *and of the* Church of England *had* **revived** *me*; *at the* first motion *of the aforesaid* Right Reverend Father in God, *and at the* first opportunity *I ever had in my Life, I received* **Confirmation** *publickly at* **his Hands**: *And immediately took occasion to publish a Treatise of* Bartholomæus Casa *paraphrastically translated: And in the* Dedication *thereof, to that Loyal Gentleman Sir* Ch. Littleton *declare*; "*I have, at length, removed all the* "Umbrages *I ever lay under: I have* joyned *my self to the* Church "*of* England; *not only upon the account of it's being* publiquely im- "posed (*which, in things* Indifferent, *is no* small *consideration*: "*as I learned from the* Scottish Transactions *at* Perth) *but because*

it

" *it is the* leaſt defining, *and conſequently the* moſt comprehenſive,
" *and fitting to be* National: *Wherein any* unprejudiced Perſon
" (*not reſolved to miſtake* particular mens Actions *or* Opinions,
" *for* Church-Principles *and* Errours) *may obſerve* all thoſe Cir-
" cumſtances *to continue in order to the* promotion of Sober Piety,
" *which the* Angels *proclaimed at the Birth of the* World's Savi-
" our, *viz.* Glory to God in the higheſt, Peace on Earth, and
" Good will towards men. *In fine,* it *bears the* Impreſs *of what*
" *is* Ancient *and* Apoſtolick, *as well as* True: *I always had a* Re-
" verence *for the* Primitive Chriſtians, *and it is with a* Sincerity
" *not unbecoming* them, *that I* thus declare *my ſelf.*—— *Thus*
did He unrequeſted *declare himſelf,* moſt Generous *and* Candid
Epiſcoparians, *who pleaded for* **your Toleration,** *when* **you**
were in diſtreſs, *and when* his Adverſaries *were* Praying, Preach-
ing, *and* Acting againſt you, *and Mr.* R. B. *writ his* Key for
Catholicks: *Thus* He *declared* three Years *and more, before* Ece-
bolius *publiſhed his Sermon upon the* **Kings Murder:** *Thus* He *de-
clared, without any* Hope of Advancement, *or* other ends, *than to
live as became a* **Peaceable** *and* **Quiet Subject,** *and* Son of the
Church. *If after* all this; *if after the taking of the* Oaths of
Allegiance *and* Supremacy, *and the having done* all *that the* King
and Church *required, I have not yielded* you *ſufficient ſatisfaction;
pardon me, if I ſay I underſtand not* **what is neceſſary to the
Civil, and Eccleſiaſtical Peace;** *and you do exceed the* Prece-
dents *of any* Hiſtory, *or any* Policy, *which I am acquainted
with.*

Have my Adverſaries? hath Mr. *R. B.* declared *thus much* in Print yet?

I think this Diſcourſe to be the moſt pertinent Anſwer *I could
give to all the* Railing *of my* Adverſaries; *without deſcending to*
Particulars, *the Proſecution whereof* (*and even* Repetition) *would
ſeem* tedious, *and in theſe times* unſeaſonable. *I now deſcend to o-
ther Paſſages in* Ecebolius. *He ſaid, my Head was* **Red-hot.** *By
the difference of the* Character, *who would not imagine that he re-
flected on me as* **Red-Headed?** *He hath* now *varied the* Letter, *P. 28.
and ſaith* **Red hot;** *is not this the* Sophiſtication *of a* groſs Lye?
He adds another: " *If I had ſaid, your* Head *was* **Red,** *I had
" not been ſuch a* Lyer *neither; it was a direct* **Carrot,** *laſt time I
" ſaw* it.—— *It never was of other Colour than of the pale* Hungary
Gold; and in time altered to a Light Brown: *'Twas ſuch as the
Ancients did aſcribe to* Apollo *and* Mercury (*though very thin*)
and as the Wiſeſt Nations *have, and do deſire to imitate by* Arti-
fice.—— *But his words were,* **his Head** is **Red-hot.** *Which is*

a Lye. *And if it were not,* so much *to be said for* that Colour, *that I should not be ashamed* thereof: *Besides that some of the* R. S. *must suffer in the* contumely, *if it be one: Yet I neither take* **that,** *or the other of* **Bald-Pate,** *to carry any thing of* Ignominy *in* them. *He had also said,* "*In testimony of his great* Love *and* Devotion "*to the* King, *he thus subscribes the Title of his rare Book of* Cho- "colata, *by* **Henry Stubs, Physician for** *his* **Majesty** *in the* Il- "land *of* **Jamaica.** Now (*no doubt*) *he is Physician for his* **Ma-** "**jesty** *too in the Town of* **Warwick,** *and He intends to be* Physici- "an **for** *his* **Majesty** *in the* City *of* **London.**—— *I could not but look upon* this *as a* Lying Insinuation, *as if I had dared to* Usurp *that* Character, *which indeed his* **Majesty** *did* Honour *me with*: *And* who would not, *as the words import, conclude, that either* I was not *Physician for* his **Majesty** *at* Jamaica, *or* **no doubt** *am now Physician for his* **Majesty** *at* Warwick? *which for any man else to say* were a Lye; *but in* Ecebolius *and* Vertuoso *'tis only* **Raillery.** *Such* **Raillery** *it is when he speaks of my* Spitting fire *in a* Feavour, *and* Reading *by the* Light *of his* Spittle. *Whereas I neither had any* Feavour *these many Years, nor did ever such a* Phænomenon *befall me in* one. *Several Months after I had been sick of the* Colick Bilious (*which neither is a* Feaver, *nor* was *attended* with any) *upon the taking of a certain* Course of Physick, *and Indulging my self in the taking of* **Snuffe** (*I do not take it for a contumely, to be told of my* **Snuffe-Box**.) *I observed that sometimes* in the dark, *as I blew my* Nose, *a stream of* **Light** *from my* Eyes *and* Nostrils *would issue out, and accompany the* Pituita, *even to the Ground*; *so that I could discover a* Straw *or* Pinn. *But what is* all this *to a* Feaver-Fire, *and* Reading *by it? If* this *be not a* **Lye,** *'tis not more certain, that* Truth is not to be spoken at all times, *than that in* this manner, *it ought never to be spoke by a* **Divine**; *though* Ecebolius *may say any thing. All the* Odious Stories *in him and* D. M. *are* thus *disguised: I imparted this odde* Phæno- menon **de luce animalium** *to one of the* R. S. *desiring to know his judgment,* If it *might be the effect of the* Physick, *or such* Snuffe *as I* then *took. From* him *'tis* now *transmitted to* Ecebolius: *As many others (whom I know) contributed their* Symbols *to this* **Farce,** *as well as that of* D. M.*s. Yet doth* Ecebolius *deny that any ever saw his Writings before they were Printed:* "*No man, except my* "Transcriber, *ever saw* my Book *till it was* Printed.—— *This is a notorious* Lye (*except He* Æquivocate) *for one of his* Neigh- bours *saw the* blotted *Manuscript of* Plus Ultra. *And he sent* it *to Doctor* More *to peruse, before it went to the* Press: *The Doctor told*

They have ransacked *all Corners,* inquired into the *Cabinets* of *Private persons,* & sought out some *Letters of Raillery* written by me, to provide *Materials* for these *Libells.*

told me he altered nothing *indeed; but remitted it with a Proverb* (*for* **Proverbs** *and* **Poetry**, *he is equal to Mr.* Crosse) *to this purpose, as if* Ecebolius *had over-acted in the* Dispute. *This,* Ecebolius *confessed to* me *at* Bathe *before Doctor* F.C. *and repeated the* Adage, *yet said, that* **he added nothing thereunto.** *Which I believe* may be true: *But yet hence it is evident, that* **he is a Lyer.** *Except the* Virtuosi *be* Dæmoniacks, *two must have seen his* Prefatory Answer *long before it was* Printed, *and* they *above one hundred miles from* Bathe: *For* they *repeated it* (*and I from* them *to* him *at* Bathe) *and said* **they had seen it:** *And Doctor* M. *communicates some* Heads *of it, which I believe* he *had not by* **Inspiration.** *I could name more; but this is enough to satisfie the world of the* Integrity *of our* Vertuoso, *and shew* what Credit he deserves. *Yet I must add, that the* Renegado *at* Bathe *doth transmit* his Papers, *and hold strickt Correspondence with* H. O. *a* London-Renegado, *and he conferrs with the rest of the* Renegadoes. Ecebolius *did aske Doctor* G. *of* Bathe (*as his intimate Friend told me*) *to help* him *with an account of the* New Inventions *in* Anatomy: *Upon the Publication of* Plus ultra, *there was some* mis-understanding *about* it: *The Cause, I know* —— *About Mr.* Crosse, *that He* hired me, *the Gazettier of* Chugh *doth thus write.* "*The* Reverend "Disputer *after this* caresshed *and* courted *him highly,* treated "*him at* Bathe, *and* entertained *him* **divers times** *with* **dear wel-** "*come at* his House, *so that at last* He *was* fastned. *I was at* his House *once, and* no more: *My* welcome *was as* great *as he could at* that time *expres: But not so as to be reported* **dear** *unto him. I have elsewhere published the* Truth, *nor doth* Ecebolius *disprove it; but thus* Apologizeth *for himself* —— "*I* insinuated *what* "*I* thought, *and had* heard *in other termes, and if I* Lyed, *in* "Thinking, *and* Hearing, *and giving some Hints of what was re-* "*ported, and was likely enough to be believed. This is* all *he replies for* words *so* **Positive** *and* **Peremptory:** *'Tis no* Insinuation, *but* Assertion: *No mention occurres that* He was told so, *or* Imagined *so. This Defence recalls to my mind some Passages when Doctor* F. C. *did bring* us two *to an Enterview: I complained to him of a multitude of* Lyes *which he* writ, *and was going to Print: and desired he would not trouble the world with such* Fopperies; *for though they would give me Advantages over him, yet I had not Leisure to pursue* them. *I told him that He had written a* Letter (*of which I had seen the* Original) *to Doctor* J. Gardiner, *how I went from* Bristol *to* Chue *in the Company of a* Quaker, *and that Mr.* Crosse *and I fell out there, and had done together by the Ears*

Prefat. Ans. P. 190.

In his Letter. P. 29.

He is a very *hopeful Intelligent* young *Gentleman*, and now a *Scholar* at *Cambridg*.

(or to this effect) had not the Quaker *parted us: That afterwards the* Quaker *and I came to* Briſtol, *and there* quarrelled, *and abuſed each other. This he* Comically *related to his Friend; But this Relation differs much from that of my* **Dear welcome** *at* **Chue.** *I told him the Perſon that accompanied me was no* Quaker, *though his* Father *was one: That I was willing to embrace his* Overture *of guiding me to* Chue, *being as great a* Stranger *to the* Way, *as unto* him. *That I was not aſhamed to be in* his Company, *who was ſo well known to the Lord* Brouncker, *and the Biſhop of* Ch. *In ſumm, I ſaid I was confident that He was of the* R. S. *and in their* Catalogue: *He denied* **that,** *and upon the wager of a* Guinny, *the Hiſtory was conſulted: But it appeared not that* He was there *(though I was ſure He had been* at *the* R. S.) *and I* **Payed it.** *This hath given* Ecebolius *ſo much matter of* Triumph, *whereas it was not a* tryal of *any* **Citation** *in the Book againſt* **Him.** *I convinced* him *before Doctor* F. C. *that we had* no Quarrel *at* Chue, *nor did I return to* Briſtol, *but left Mr.* M. S. *to return alone, and departed ſtreight to* Bathe, *and* Warwick. *He then replied, that* **He was told ſo.** *Juſt ſo* D. M. *having Printed, that* no Civil woman would make uſe of me at *Warwick*; *Defended himſelf,* That he found now that All his Intelligence was not Goſpel. *Doth any man imagine it poſſible that* **Civil Society** *can ſubſiſt, if* **ſuch Practices** *as theſe be* tolerated? *Thus* Ecebolius *tells us of an* Oxford *Doctor, that ſhould ſay to this purpoſe:* "*That* "*Mr.* Stubs is ſo great a —— that if he tell you that He was "at ſuch a Gentlemans Table, where this, or that Diſcourſe hap- "pened; you are not to believe as much, as that he knows the Gentleman, or ever ſaw him. —— *Whoſoever that* Doctor *were, and if ever there were ſo* miſtaken *a Perſon, It did not become* Ecebolius *to publiſh it, who had ſeen me more than* one Summer *at* Bathe, *attending on the Healths of as* Honourable Patients *as any that Doctor ever was I think in company with. But not to inſiſt on any more* **Lyes** *(which I am averſe from purſuing, to ſave* my ſelf *and* Reader *ſome* trouble, *and the* Clergy *that* diſgrace, *leſt it ſhould be ſaid of one of their number,* **He was the moſt Impudent Lyer in the World**). *I do hereby demand* Ecebolius *for my* **Vaſſal** *and* **Victime.** *By his* **own Promiſe** *he is obliged to render* himſelf, *and if there be any* Generoſity *in my* Adverſaries, *they will ſee that He performe it. After* he *had* asked his half-Brother if he were a Thief, *and brought* **his** *Certificate, and the Atteſtation of* Jo. a Court *to prove the Truth of his* **Relation** *of the Conference with Mr.* Croſſe (*which yet I am ſo far from crediting, that*

Preſat. Anſw. p. 107.

that I will prove out of Ecebolius *himself that they atteſt a* **Lye**, *and that* it was not **exactly** and **ſincerely** ſuch as it is reported.) *he adds*: "*Thus I have* proved *my* Relation *for Mr.* Stubb's *Satis-* "*faction*: *And there is no* other *matter I have related concerning* "either of them, *but I ſhall make it good, when-ever I am called* "*upon to do it*: *Yea, if they pleaſe, I am ready to lay the iſſue of all* "*here. If I cannot prove every matter of Fact, that I have print-* "*ed about them*; *I ſhall* humbly lay my Neck at their Feet: *And* "*if on the other hand, either of theſe Adverſaries can prove one of* "*thoſe reproachful things they have alledged againſt me, I'll be* "*their* **Vaſſal** *and their* **Victime.**—— *In his* Letter *now He* "*writes.* "*I never ſaid* any thing *of* you, *that I will not juſtifie* "*to a* **Tittle.**—— *I writ unto him upon the coming forth of the* **Prefatory Anſwer**, *and having ſhewed him more* **Lyes**, *and* Specimina *of his* Ignorance *than he now takes notice of*; *I told him to this purpoſe*; 'Twas in vain to peſter the world with Books of Rayling, that I demanded him for my **Vaſſal**, and would convince him **Formally** where, and when *he pleaſe, either before* indifferent Perſons at *Bathe*, or before the *R. S.* and my Lord *Brouncker*: And that, if He *declined this*, I *would proceed to* **Poſt** *him at* London, Oxford, Cambridg, Bathe, *and* Briſtol. *All the Anſwer* I *received is this in* Print, *which is as* pertinent *to what I demanded, as all* He *elſe writes is to what* I object. I *do here* publickly *make the ſame* overture: I *will* openly *in any* convenient place, *and before* Intelligent Judges, *prove him a* **Lyer**, *and ſo* Ignorant *and* Illiterate a Fellow, *that He is not fit to come into any* Learned company, *or to* open his Mouth *among ſt them. I have already evinced his* Ignorance: *And all the* Impertinence I *am guilty of is this*; *that my* Antitheſes *are* Logically *and* Directly *oppoſite to* his. I *will give an Inſtance or two, by which the* Reader *may judge.* p. 27.

Mr. *Glanvill.* Plus ultra. *P.* 7.

"*The* unfruitfulneſs *of thoſe* Methods *of* Science, *which in ſo* "*many* Centuries, *never brought the World ſo much* Practical Be- "neficial Knowledg, *as would help towards the* Cure *of a* Cut-*Fin-* "*ger, is a palpable Argument, that they were* Fundamental Mi- "ſtakes, *and the* way *was not* right.

The

The *Antitheſis* of H. S.

"I *ſuppoſe that the inſtance* againſt the Ancient Methods of Sci-
"ence, *ſince it is reſtrained to their* Utility *to cure a* Cut-finger, *is*
"*particularly directed to* Phyſick: *For, againſt any* other Method
"of Science *the Objection were* ridiculous: *And in oppoſition to*
"this Aſſertion, I *do ſay*, I *have proved, and will do it to any man,*
"*that*

"*The Ancient Methods of Science have brought* Phyſick *to a*
"great perfection, *have explicated ſo the* Cauſes of Diſeaſes, *and*
"*their Cures; and do ſo enable us to paſs a further judgment upon*
"new Plants, *and other Diſcoveries in the* Materia Medica, *as well*
"*as* new Diſeaſes, *beſides that* they *direct us upon* their Princi-
"ples *how to* Compound Medicaments *according to* all Intentions,
"*that neither were they* heretofore, *nor can any* underſtanding
"Perſon (*who acts on* their Grounds) *be at a loſs for the Cure*
"*of a* Cut-Finger.

Mr. *Glanvill's* Epicriſis.

Prefat. Anſw. p. 111 "*Do* I *ſpeak of the* Methods *of* Phyſick, Chirurgery, *or any*
"Practical Art? *If* I *had done* ſo *Maſter* Stubbs *had had reaſon.*
"*But it was* nothing thus, I *had not to do with any thing of* that
"Nature, *but was diſcourſing of the* Infertility *of the way of* Noti-
"on *and* Diſpute; *concerning which* I *affirmed, that it produced no*
Ibid p. 112. "Practical uſeful Knowledge.—— *And unleſs* he *can prove that*
"*they did it by the* direct Help *and conduct of the* Notional *Diſ-*
"*puting* Phyſiology, *he will not Sacrifice me to* Publick Oblo-
"quy *here, nor ſay any thing in which* I *am concerned at all.* "*Who*
In his Letter, p. 12. "*ever denied that* Diſeaſes *were cured by* theſe Phyſicians, *uſing*
"Reaſon, Experience, *and* General Rules? *But when do you*
"*prove that the Doctrine of the* Firſt-Matter, *and* Forms, *do* di-
"rectly, *and of* it ſelf, *lead to* any Diſcovery *by which they were*
"aſſiſted *in Cures? This* I *told you was my meaning in* theſe
"Words, *which you force to a ſenſe which beſt befits your mali-*
"*cious purpoſe.*

The *Dialyſis* by *H. S.*

"I *did not expect that a man ſhould pretend to* Common Reaſon,

and

and yet by alteration of the terms to vary the Subject *of the dispute. At first your* Assertion *was concerning* all the Ancient Methods of Science, *of which even the* Empirical Physicians *did follow* one; *The* Methodists, *or* Corpuscularian *Physicians* another; *and the* Dogmatists *or* Hippocratick-Galenical *Physicians, a* third; *You now recede from* hence, *and do not only exclude the two former from the* Controversie, *but the* latter. *You grant that* Diseases *and* Cut-Fingers *were cured by them, they using* (*or rather* proceeding upon) Reason, Experience, *and certain* General Rules: *But you say first, that you are not to be understood concerning* Physick, *or* Chyrurgery *or any* Practical Art? *Truly, had not you limited your Discourse to* Physick, *all the* mixt Mathematicks *had been concerned in the Quarrel: But I pray learn* Logick, *especially the Doctrine of* Proposition, *that you may know how the* Predicate *and* Subject *are* modelled *therein. I appeal to any intelligent* University-man, *whether I could understand you otherwise then about* Practical knowledge, Physick, *and* Chyrurgery, *since you demand a* Practical effect, *and that to be in* Physick *or* Chyrurgery. *The course you now take is,*

Delphinum sylvis appingere, fluctibus apros.

You would have me prove that those things may produce Practical Knowledge, which consists in meer Speculation, and terminate there. *If you ever were so good a* Disputant *as you pretend to have been, and misspent so much time in your first Studies at* Oxford (*which I believe you did not*) *you could not be unacquainted with the Distinctions between* Speculative *and* Practical Sciences *and* Arts: *And you would no more have expected from the* first *the* Effects *of the* latter; *than* you (*but alas! you have no insight*

Plus ultra. P. 123.

into the Mathematicks, *as Doctor* H. M. *confessed to me lately*; *and the learned* Prelate *hath avowed to* twenty *persons*; *he to whom* you *sent* your Book, *and who sent* you *an* obliging Letter of thanks, *not for* your performances; *but your* Present) *then you would expect from pure* Mathematicks *the productions of the* mixt. *Keep your self to this* Position *that you were not to be understood of any particular* Art, Physick, *or* Chyrurgery, *and I will only say*, you are Hair-braind, *or a* Mad-Man; *as you call me. But* you *again change the* state of the Question; *for you demand I should prove that the* Ancients *did their Cures by the* direct Help *and* Conduct *of the* Notional Disputing Physiology; *and without I prove this, I do nothing. If the*, Physicians *do their* practical Science *are not* spoken of *nor intended I am not concerned in the* Quarrel: *However to gratifie you with some Reply*; *I tell you, that if you mean by* Physiology, *that part of* Natural Philosophy *which is accommodated unto, and is the* basis *of the* Dogmatical Physicians (*in* Italy *and* Spain *especially*) *I do say that by the* direct help *and* conduct *thereof*, they do their Cures; *but I must tell you, that in a* practical Science, *or* Art, *'tis not necessary that every* part *and* parcel *thereof be* Practical, *as you might have learned at* Oxford: *Neither is it any more necessary that to compleat* Physick, every point *be determined, and not* disputed; *then it is to* Mathematicks *that it be decided*, whether there be any such thing in nature as a Mathematical Point, *or* Surfaces; *or* whether the Circle can be squared? *Though it hath been disputed, and is still*, How Vision is performed, *and* where? *Yet do men* See, *and the* Masters of Opticks *do Wonders. But you again change the* state of the Question, *whilst you demand* I *should prove that* the Doctrine of the first Matter and Forms, did, directly, and of it self lead to any dis-

covery

covery, by which they were assisted in their Cures. *I am hereby obliged to prove that* a part shall do as much as the whole: *That* one Round of a Ladder shall mount a Man to the World in the Moon: *Now that the hopes of* flying thither *are disappointed, I am to prove that the* Ancient Methods of Science did enable to cure a cut-Finger: *The Doctrine of the* first Matter *and* Forms *is neither a* Method of Science, *nor* Science, *though a* part of Physiology. *Who is now the* impertinent? *Where lies the charge of* impudence.

Thus *this* Illiterate *Ecebolius doth serve me in* every Case, *that he seems to reply unto almost: the* Citation *of Me.* Boyle *is* true (*bateing the errour of the Press, whereupon he triumphs, I appointed it to be Printed by the Book he followed: And I derive no advantage from the* Variation. *For doth Mr.* B. *say the* Spots were not there, *but that* during many Months, they appeared much seldomer, than it seems they did before. *Is it a true* Maxime *in* Natural Philosophy, *which in* Law *sometimes passeth currently*? Idem est non apparere & non esse. *The* Latine *Edition of Mr.* B. *which was approved by* him, *and which I followed at first, sayes.* Quæ [*maculæ*] per menses aliquot continuos tanto quam antea (uti videtur) rarius apparuerè. *He is thus* cautious *I believe, because any man that hath inquired into the* Cælestial Phænomena, *must know that 'tis Recorded how* two *or* more *using* Telescopes *at the same time, have related* different Observations: *At the* same time *that* Galilæo *and* Scheiner *made* their Observations *of those* Spots, *other* Learned Inquisitive *men could* not see them, *or not in the* same places: *For ought I can guess, at the* same time *that Mr.* R.B. *could not see* them *the dilligent* Zucchius *might see them with his* Telescopes, *which seem to be the* most accurate

P. 145. Edit. Amstelodam, 1667

of all, because the most constant; *nor doth it* appear *that Mr.* R. B. *by reason of the Weakness of his Eyes, or any in* England *understood their use* so well *as* He. *'Tis his assertion,* "Assero primo, satis constare con-"sensum apparentiarum, sive in locis proxime, sive ea-"dem die, sive pluribus longissime dissitis; sive con-"tinenter diebus a peritis Observatoribus adno-tentur. *It is not to be doubted but that* skilful Artists *understand the* use *and* placing *of* Telescopes *of* all sorts: *'Tis not to be doubted, but that* their Telescopes *were as* true *when employed on* terrene Objects *at a* due distance, *with a* proportionate Medium, *and* convenient apperture, *as the* Figure *and* confirmation of them *did admit of, and was* requisite *to verifie their Observations* on Earth: *But even on* Earth *there would be no* certainty of the exactness of their Discoveries, *could we not by* near approach *and* sensible Examination *convince our selves* further. *Besides even in* this Air *there happens such* secret Alterations, *that* Kircher *could on some dayes discover* Ætna *from the Isle of* Malta, *which on the* next day *when the Sky seemed much* more clear, *he could* not see. *Now if we apply* all this *to the Cœlestial* Phænomena *observed by* Telescopes, *concerning the distance whereof, the* Medium *and the* Nature *of the* Objects *and their* Colours (*whether* Emphatical *or* Real) *we can make no* sensible *and* near Inquiries: *How far are we* short *of all that* Ecebolius *doth prate of? What* consequence *is there in his Argument, that* because they do not deceive us on Earth, *therefore* they will not in the Skie? *In fine, I have demonstrated; That* Telescopes are not so certain as our Eyes: *That* Telescopes do vary their Objects in some things, besides their proportions; *nor are their* Informations *the* same in all things, *but the* mentioned Difference. *Which is* contradictory *to what this* Ignoramns *saith; and whatever*

Zucchius philos. Opt. part 1. c. 18. Sect. viij. p. 232.

Ricciol. Almagest. nov. l. 10 Sect. 6. p. 660. Prob. 50. See Mr. *Glanvill* if you can find that in the Index.

ever Mr. Croſſe ſaid, (*of which I am* uncertain) *'tis a ſhame that this* Arrogant *ſhould* Talk *or* Write *thus: and they may bluſh who were* preſent *at*, *and* had a ſhare in, *and* witneſſed *unto ſo* ridiculous *a piece of* Converſation. *I am to learn a new* Logick, *if my* Antitheſes *be not* contradictory to his Tenets: *and* if they be, *let* him *confeſs* they are pertinent, *and prove them to be falſe: Which the* Virtuoſo *ſaith, that* He hath done: Since all he hath ſaid, or is likely to ſay for ever, is already anſwered in his former account of my Spirits, and Performances. In the Preface to his Letter. *Now*, Gentlemen, *'tis clear that the* R. S. *found out* ſome *of the* Five Inſtruments *ſo famed for advancing Knowledge. Now 'tis evident that the* R. S. *did* firſt propoſe *and* practiſe *the* Transfuſion of Blood: *Who can any longer deny, but that the* Romans *held it* Unlawful *to look on the* Entrails? *And that* Chymiſtry *was not in uſe with* Ariſtotle *and his* Sectators? *Let it paſs that* Tertullian *ſeverely cenſured an inquiſitive Phyſitian* of his time *for this* practiſe [*of* Anatomy] *and that one of the Popes (he takes it to be* Boniface VIII.) *threatned to Excommunicate thoſe that ſhould do any thing of this* then abominable *nature. All theſe things (and many* Falſities *more of which his* Plus ultra *yields me an* Additional ſupply) *are anſwered (and that* pertinently, *and as becomes a* Virtuoſo) *by the* Demonſtration *of the* Malignity of my Temper, *and* Hypocriſie. *I ſhewed how* Eccebolius *complained that* all his firſt Studies *at* Oxford *did not qualifie* him *for the World of* Action *and* Buſineſs: *I do here ſolemnly avow, that* they have Ruined me: *For I thereby am come to ſo* groſs Ignorance, *as not to know what is* pertinent, *or what 'tis to* oppoſe, *and* Anſwer: *and for this Diſcovery, I am redevable to* thoſe generous men that have converſed with real Nature, undiſguiſed with

Art

Art and Notion: *I defie* Ariſtotle, *and renounce the Documents of his* Rhetorick, *wherein he told me that all the* Bitterneſs *and* Exaggerations, *whatever tend ed to raiſe* Indignation *or other* paſſions *in the Judges, were* Impertinencies *to the* Cauſe in Debate *and that the uſe of them to Judges was as* ridiculous, *as if one would try to make the* Rule *crooked, the which* He would make uſe of. *I will ſet down the Paſſage, to demonſtrate to the World what a* Fool *he was, and what a crowde of* Silly Fellowes *were the* Areopagites *of old; and I will ſet it down in Greek, though I know* Eccebolius *can do little more than read it (and therefore corrected the* Erratum *of Doctor* More's *Letter by committing* two New ones: *As alſo miſtook the* Text *and title of his Sermon, about* Reaſon *and* Religion) *the Paſſage is this.* Νῦν μὲν ὃν οἱ τὰς τέχνας τῶν λόγων συνπήξαντες, ὀλίγον πεποιήκασιν αὐτῆς μόριον· αἱ μὲν γὰρ πίστεις, ἔντεχνόν ὄζι μόνον· τὰ δ' ἄλλα, πεφύκασι οἱ ἢ πρὸς ἐνθυμημάτων, ἢδὲν λέγουσιν, ὅ περ ὄζι σῶμα τῆς πίστεως· Περὶ δὲ τῶν ἔξω τοῦ πράγματος, τὰ πλεῖστα πραγματεύονται διαβολὴ γὰρ, καὶ ἔλεος, καὶ ὀργὴ, καὶ τὰ τοιαῦτα πάθη τῆς ψυχῆς· ὁ πρὸς τὸ πρᾶγμά ὄζιν, ἀλλὰ πρὸς τὴ δικασήν· ὥς', εἰ περὶ πάσας ἦν τὰς κρίσεις, καθάπερ ἐν ἐνίοις νῦν ὄζι τῶν πόλεων, καὶ μάλιστα ἐν ταῖς εὐνομουμένοις, ἢδὲν ἂν εἶχον ὅπ λέγωσιν· ἅπαντες γὰρ, οἱ μὲ, οἴονται δεῖν ὕπω τὸς νόμος· ἀγορεύειν· οἱ δὲ, καὶ χρόνται, καὶ κολύουσιν ἔξω τοῦ πράγμαΘ λέγειν, καθάπερ καὶ ἐν ἀρείῳ πάγῳ· ὀρθῶς τοῦτο νομίζοντες· ὁ γὰρ δεῖ τὴ δικασὴν διαστρέφειν, εἰς ὀργὴν πεφέροντας, ἢ φθόνον, ἢ ἔλεον· ὅμοιον γὰρ κἂν εἴπις, ᾧ μέλει χρῆσθαι κανόνι, τοῦτο ποιήσει σρεβλόν· Ἐπ δὲ φανερὸν, ὅπ τοῦ μὲν ἀμφιβπτόντος ἢδὲν ἐσιν ἔξω τοῦ δεῖξαι τὸ πρᾶγμα, ὅπ' ἐσιν ἢ ὐκ ἐσιν, ἢ γέγονεν ἢ ὐ γέγονεν. *Away with thoſe* Venerable Seats: *Confound that* Notional Learning: *Thoſe* Logical *tricks about* Shuffling *and* ordering Propoſitions *and* Forms of Syllogiſme, *the diſtinctions of* Secundum quid *and* Sympliciter, *the prædications of* Genus and Species, *&c. are juſtly rejected, and railed upon by* this Virtuoſo: *'Tis* they *have betrayed me to* this Baſſe: *'Tis* this *hath made me turn over* Indexes (*and read* Books, *that I might know what to look for*

in

in the Index *of such and such an* Author, *and supply the* defects *and* want *of an* Index) *were the* Mechanical Education *received*, *and the* Jesuits Morals *substituted instead of* Aristotle, *and* Thomas Aquinas (*perhaps this was intended in the* puny Society *contrived at* Bathe *and* Bristol, *where new* Hypotheses *of* Morality *were to be proposed*) *then* Lying (*if serviceable*) *were as good as* Truth, *and* Poor Robbins Almanack, Montelion, *or* Glanvill, *as good Authors as* Ricciolus, *and* Zucchius: *The authority of* Hadrianus Junius *should be* baffled *by those who had not* opportunity (*or were negligent*) *to enquire exactly into the* Original of Printing: *And let the States of* Zealand *inquire, and judge never so uprightly concerning* matter of Fact (*done in their own Country,*) *and let* Borellus *publish it in Print; yet shall* Metius *have the glory of the* first Invention, *and* Galileo *be he that* first *applyed it to the Stars. But upon* second Thoughts, *I believe that the* World *of* business and action *is not such as* Eccebolius *talketh of; that the* Mechanical Education *is the most* Extravagant Folly *imaginable: That, to* Preserve our old Religion, *tis absolutely necessary that we retain our* Old Learning: *that there is a greater value to be placed on* Controversial Divines, *then our* Virtuoso *do allow of in* their Letter *against* me; *and perhaps one* Jewel, Lawde, Andrews, Davenant, Whitaker, Chillingworth, Scaliger, Grotius, Selden, Causabon, *or* Salmasius *may ere long be more* serviceable *unto* Monarchy *than* a Fleet of Ships, Thirty thousand horse and Foot, *or* Three hundred Thousand Virtuosi: *I do not reckon my* Adversaries *amongst the* Military *strength of the Nation, because they have abandoned their* Standard: The Standard of English Eloquence: *and when the people have a* little more *observed them, the* Works *which they have atchieved in* Six Years *above all that e-*

Plus Ultra p. 42.

ver

ver the Aristotelians *ever effected, will only conduce to the* Improvements of Raillery; *We shall perceive that we have been out of the* Way *all this while; that the interests of a* Lineal *and* Hereditary Monarchy *are different from those of any* Usurper; *and if my* Olivarian Adversaries *may understand what* Arts *are subservient to the* advancing, *or continuing of a* Cromwell, *a* Regecide: I *am content to dissent* once more *from them in behalf of the* present Monarchy, *the* Church of England, *the* Universities, *and my own* Faculty: *And* I *think it is no* ill Prayer *for me to use, nor no argument of* Faction *and* disloyalty *to wish, that* God would endew many others with such a malignity of Temper, and such Hypocrisie as I am now possessed with.

They hindred Four Books of mine in *Michelmas* Term from being Licensed, though they contained *nothing* repugnant to the *Monarchy, Church*, or *Good Manners*

I *shall not dismiss* Eccebolius *nor the* Quarrel *thus:* I *desire that all ingenious Persons would solicite for me to have the* Liberty of the Press; *and importune the* Virtuosi, *that* Eccebolius *may render himself my* Vassal, *and do his* Homage *and* Swear Fealty: *if he do so. Sir* H. Spelman *will tell him his Style is a* Lewd Fellow, *and a* Villain: *if he do not* make good his word. He *will deserve those Elogies upon* another *account.* I *will not make a* Victime *of* Him; *the* Christian Law *hath put an end to all* Sacrifices: *And that which is* Levitical, *doth exclude* Unclean Beasts *from the number of* Temple Offerings: I *am not so* angry *as to turn* Paynim, *that I may be revenged on the* R---- *otherwise, since* Doggs *and* Asses *were of old Sacrificed to* Mars, *and* Black Sheep *to* Pluto; *the World could not yield a more* Agreeable Victime *for* either. *He shall live* for me (*which is more then* my Adversaries *desire I should do*) *except the* Devil claim his due, *and then I ought to be* just, *if* Old Proverbs *may pass current amongst* New Phylosophers: They *are more of* kinn, *and a greater is the af-*

Δὶς ϛολος

affinity of the Name, *than* Stubb and Stubbs *yet to shew my* Pedigree, *he tells me in the* preface to the Preparatory Answer, *of the* Stubb's *that were hanged for* Treason: *'tis a* Thin kindred that yields neither Whore nor Rogue: *There are more of the* Glanvills *besides* him *that disgrace the* Family: *However,* He *should not have changed the* Terms *again, and given me Allegations of* one Francis Stubbs *that was* Executed, *and one* John Stubbs, *whom* Cambden and Marten *admire for that* Bravery *which he shewed at the* Cutting off of his Hand: *He took off his Hatt immediately thereupon with the* remaining hand, *and cryed* God bless the Queen, *nor did* He *suffer for* Treason, *his Book contained not so much of* Reproaches against the Queen, as Reasons against her Marriage with a French Papist. *Now let us observe* from hence *the* Logick *of our* Virtuoso: *How doth it appear that the* Stubb's were hanged for Treason in former Reigns: *Here is but* one *so Executed, and he not of* my Name; *and I am too little acquainted with my* Pedigree *to claim Kindred with either of the* Persons *alledged.*

As to the Universities, *although it matter not what* Ecebolius *saith in* behalf of them, *because he doth not understand* What he commends; *yet ought he to be* blamed *for detracting* from them, *lest it turn to the* universal *Detriment of the* Monarchy *and* Religion. *The passage I cited, is too* odious *to be* thus *excused: And even now he rejects their* Logick, Natural Philosophy *and* Metaphysicks; *each whereof he is unacquainted with. As much as he pretends to have studied* Aristotle (*whom I am sure he cannot Construe*) *and the* Peripatetick Physiology, *yet did he not know that* Aristotle *held the* Gravity of the Ayr, *and was therein followed by the* Avinceninsts *&* Averroists, *whose* Authority *alone was principally received in the* Arabian

Schools, and generally amongst the Western Christians, *till the* Laterane Council *put a check to the* Averroists. *As for* Logick, *he knows not* what it is, *either in the* Practise *or* Notion; *without* Good skill *therein, 'tis impossible for a man to* benefit himself *considerably in the* Studies *which our* Virtuoso *doth allow of: or without* Metaphysicks *to defend the* Christian Religion *and* Protestancy, *or explain the* 39. Articles, *Athanasian, and* Nicene Creeds. *But He spoke in* my hearing *with much contempt of the* Thirty Nine Articles, *saying,* Three of them were calvinistical: *And as to the* Athanasian Creed, *He doth never read it, and usually declaims against it; and told Doctor* J. M. *that* he would Burn before he would read it. *Thus he (not to speak of his curtailing the* Common Prayer, *and dis-use of the* Surplice *lest the* pulling it off *should* Discompose his Periwigg) *observes* his Subscriptions *and the* Laws of the Land! *As to what he cites out of his Letter against* Aristotle, *had he proceeded the words would have been these:* "*I blame not therefor the use of* Aristotle *in the* Universities "*among the* Iunior Students, *though I cannot approve the streightness and sloath of* Elder Dijudicants, *from* "*whom a more generous temper might be expected, than* "*to sit down in a contented despair of any further* "*progress into Science, than hath been made by their* "*Idolized Sophy and depriving themselves and all* "*this World of their* Liberty *in* Phylosophy *a* Sacra-"mental adherence *to an* Heathen Authority. *And* "*I confess 'twas this,* Pedantry, *and* Boyishness "of humour *that drew from me those Reflections* "*I directed against* Aristotle ——*This too must pass as* allowable; *must it?* Pedantry *and* Boyishness of Humour *is fixed upon the* Governours of the Universities, *how* Sage *and* Reverend *soever they be, and* what rank soever *they hold in* Church *and* State;

State; *The man of* Stagiaa *is said to be their* Idolized Sophy, *and they charged to deprive themselves and all* this World *of their Liberty in Philosophy by a* Sacramental adherence to an Heathen Authority. *I will not* exaggerate *this passage, but leave it to the consideration of all* Intelligent men, *whether this be not a* Libelling of the Universities, *and the* King *their* Founder, *and from whose Authourity* their Statutes *have force. Is it fit that such an* Ignorant, Inconsiderate Fellow *as* Ecebolius *should thus animadvert upon the Demeanour of those who are so much* his Superiours, who act according to their Statutes, *and who understand the danger of any* Innovation in Learning *under an* Hereditary Monarchy, *as well as they do the* Civil Consequences *it would draw upon the* Church: *They are sensible of the* present dammage *which it hath* done; *they know the* Character *of its* Islanders *too well, to* comply *with it: they know it is not reqnisite to the* Being, *or* Well-Being *of an* Ancient *Government to introduce such a* charge; *and that 'tis absolutely necessary that* this *do oppose it. Besides the* Fatal presidence *which* Ancient History, *& even the* Records of both Universities, *to suggest in reference to* Changes of lesser moment, *they know that the* Papists *do allow this* Philosophical Liberty *to some of their* Members *rather to* distract us, *then that they approve it; and that* their Church *hath a* power to remedy any inconvenience, *which we have not: That in their* Colledges they *reverence* Aristotle *as much as* We: * *That the* University of Lovaine *hath censured* Cartesian *Philosophy; and that the* Belgick Universities *have suppressed it publickly. I shall relate the degree of* Utrecht, *because it contanis the* Motives *they went upon, and the prejudice they found to arise from the New Philosophy.* "Ultrajectúriæ Academiæ, judicium hoc "est, *Professores Acad. Utraij reijcere* Novam istam

* See the *Judgment* and *Reasons* of the *Lovain Doctors*, in the *end* of the second Edition of *Plempius's* Fundament. Medica p 3, 5 &c. *Jac du bois* contra *Witticheum.* in pref.

" Philoſophiam; *primo quia* veteri Philoſophiæ, *quam*
" *Accademiæ toto orbem terrarum hactenus* optimo con-
" filio *docuere*, *adverſatur*, *ejuſq; fundamenta ſub-*
" *vertit. De inde quia juventutem a* vetere & ſana
Philoſophia *avertit*, impediq; quominus ad culmen
" eruditionis provehatur, *eo quod iſtius præſumptæ*
" *Philoſophiæ adminiculo technologemata in authorum*
libris, *Profeſſorumq; lectionibus ac diſputationibus uſi-*
" *tata percipere nequit. Poſtremo quod ex eadem con-*
" *trariæ* falſæ & abſurdæ Opiniones *partim conſe-*
" *quantur partim ab improvida juventute deduci poſ-*
" *ſint*, *pugnantes cum* cæteris diſciplinis *ac* facultari-
" bus, *atq; imprimis cum* Orthodoxa *Theologia.*——
To what an heighth of Impudence *and* Arrogance *it hath tranſported* Ecebolius, *is manifeſt*: *Nor are his* Abettors *leſs moderate*: *The* Hiſtory *contains the* like Suggeſtions *as I have ſhewed*: *And the* Anonymous Epiſtoler *doth fly as high*: *'Tis ſtrange a* Doctor of Divinity *ſhould write ſo*; *and more*, *that he ſhould thus defend the paſſage I animadverted upon*, *in a* Manuſcript *not yet publiſhed*, *but communicated to others*; *the reply to what I ſay* (p. 42. and 29.) *how he makes the* Vniverſities Lands alienable, *is*: They *moſt* " *were deſigned for another kind of* Worſhip than what " is now in uſe: And they may be changed in one " as well as in another Particular for the better. " But I ſpeak not againſt uſeful and modeſt diſputa- " tions, but againſt Barbarous and conceited Terms.——*Reader*, *The* Subject of the Queſtion *betwixt* him *and* me, *is* Controverſial Divinity; *not the* Barbarous *and* conceited Terms *therein*. *Who can* Diſpute *with ſuch men as theſe?*

It may not be impertinent to this ſubject *for me to take notice of a paſſage of* Mr J. E. *concerning the* Univerſities, *which though it be more favourable to* Theology *then this* laſt Author *would allow of*, *yet did it not become*

become Him *to write, it being very derogatory to the Universities.*——"*That might redeem the* World *from the Insolency of so many* Errours *as we find by daily expe-*
"*rience will not abide the* Test, *and yet retain their*
"*Tyranny*; *and that by the credit* only *of, and ad-*
"*dresses of those many* Fencing-Schooles *which have*
"*been built* (not to name them Colledges) *and en-*
"*dowed in all our Universities: I speak not here of those*
"*reverend and renowned Societies which converse with*
"Theology, *cultivate the Laws* Municipal *or forreign*;
"*but I deplore with just indignation, the* supine neg-
"lect *of the* Other, *amongst such numbers as are set a-*
"*part for empty and less fruitful* Speculations.------
These are his words in the Dedication of Nadius's *Instructions concerning a* Library (*out of which* Dedication *I find T. S. to have stollen his* Dedication *to the* King, *only he multiplyed the* Errours *of his* Original) *out of whih 'tis manifest, that Mr.* J. E. *did not understand the* Constitution *of* our Universities; *for we have no such* Fencing-Schools (*not to name them* Colledges) *built and endow'd to any* such purpose *as he speakes of: nor* any numbers set *apart for* less fruitful *and* empty speculations, *then the* Virtuosi *do pursue. 'Tis true, there is a Professour of* Natural Philosophy *in* Oxford; *and that the* Scholars *in the* Course of their Studies, *are* obliged *to employ a part of their time in* Logick, Physicks, *and* Metaphysicks: *And the reason, is because that* the interest of our Monarchy *is* an Interest of Religion, *and the* support of the Religion established by Law *is complicated with, and depends upon* those Studies: *'Tis no less then impossible for any man to* understand *or* manage *the controversies with the* Papists (*and our* Church *is framed* principally *in opposition to* them; *as appears by our* Articles, *and* Homolies: *and the* Monarchy *subsists only by that* opposition) *without a* deep knowledge *of* those Sciences: *As any man must know who hath inspected no more*

than

than the Controverſi of the Euchariſt, *wherein the Doctrine of* ſubſtance, *&* accidents, *of* Quantity *diſtinct from* Matter *of* Ubication, *&c. is ſo requiſite to be* underſtood, *that the* proteſtants *ſuſtain the diſpute without them: For if we change our* Notions *in* Natural Philoſophy, *we then differ in the* principals of diſcourſe; *and where men differ* therein, *'tis impoſſible for them to* proceed. *In all diſcourſe there muſt be ſome common* ſuppoſitions *and* definitions *admitted of; and every man that is* convinced, *is* convinced *by ſomewhat* which he already holds: *By the change agitated, and now* purſued, *we make our ſelves* incapable *of convincing a* papiſt: *and conſidering the prejudices of* long Education, *and the* Authority *of the* Catholick Church, *we muſt render our ſelves in their* judgment *as* Perfect Fooles; *and not be able* to proceed, *is in this* caſe *all one as to be* baffled. *Beſides, I cannot comprehend, and I do inculcate it to our* Church *and* States-men, *That no new diſcovery in* Natural Philoſophy *can countervaile that* dammage *which the* publick *will receive by this change of* Phiſioligical principles: *for beſides what we ſhall ſuffer in the* preſent management *of diſputes, and thoſe* dangers which uſually accompany all Changes (*which are ſuch as no* wiſe man *would* introduce *them, in a* ſettled *Government, though he comply therewith when they are* unavoydable) *we ſhall ſo diſparage all the* Reverend Fathers *&* Writers *of our Church, and of* precedent Ages, *that their* Authority *and* Repute *will ceaſe and what they have* written *become univerſally* contemptible, *when their* Philoſophical Notions *ſhall be deſpiſed, and each* ſimilitude, *or* illuſtration *ſeem* ridiculous *to* every boy. *'Tis moſt certain, that* we know the inconveniencies of our preſent condition, and know we can ſubſiſt and flouriſh under them: *but* we do not know the incon-

veni-

veniences we ſhall run into, nor any befiting remedy for them.

I did in a private Letter *upbraid* Ecebolius *with* K--- *in omitting a paſſage of* Dr. H. Moor's *Letter, wherein he declared, that He payed not any of* thoſe weekly Contributions, *no nor ſo much as* Admiſſion-money; *as was uſual. I could not believe the Dr. ſo* Diſingenuous *as to deny it, or equivocate, as he ſeemed to do in the Caſe: but he himſelf told me* what was omitted, *he was* troubled at it, *and proteſted upon* the Faith of a Chriſtian, *that 'twas done* without his Knowledge: *and that He impowred* Ecebolius *to* print the whole Letter. *Let the World now judge of the demeanor of* Ecebolius, *imagine* how He ſerves me, *who thus abuſed* his beſt Friend. *He replies for himſelf, that* he omitted that Meaning, becauſe it ſeemed to be ridiculous. *But he might have known, that I reckoned upon all thoſe* Catalogues of their Fellows, as falſe, *where ſuch were accounted on, as neither hold* Correſpondence with the reſt, *nor* Pay the uſual Contributions. *All the miſtake of mine was that I ſuppoſed him* to have payed Admiſſion-money; *and* ſo *to have been* heretofore *of the* R. S. *Whereas* He never payed ſo much as that; *and the* Fineſs *is more manifeſt, that they pick up a* company of men, *and deſire* they would augment the Speciouſneſs of their Catalogues, *and* ducquoy others; *and they will ask no more of* them. *The excuſe of* Ecebolius *is the more* unpardonable, *becauſe at our Enterview at* Bathe, *I told him* this very thing *before Doctor* F. C.

P. 33.

See my Preface againſt T. S.

In his Letter, p. 12.

I forgot to take notice of one paſſage in Ecebolius *about* Flavius Goia, *that* He *invented the* Compaſs.

He

He acknowledgeth that it is a miſtake: *but 'tis an error of the* Preſs: *it ſhould have been* Flavius, *or* Goia. *He is confident it was ſo in his Copy: and that he was ſenſible of the miſtake committed about it elſewhere. But I am confident the miſtake was not in the* Printer, *but* Author: *for in his* Plus ultra, *He doth make* Flavius Goia *of* Amalphis *to be the diſcoverer of the* Compaſs: *whereas all the beſt Writers ſay, the* inventor *was either* Flavius *of* Amalfi; *or* Johannes Goia (*or* Gira) *of* Melfi.

P. 80.

FINIS.

A

Bacon-Face

NO

BEAUTY:

OR, A

REPLY to the IMPERTINENCE and FOLLY

OF

GEORGE THOMSOM, M. D. An Insolent pretender to *Physick* and *Chymistry*.

By *HENRY STUBBE*, Physician in *Warwick*.

——————*Sapientia prima*
Stultitia *caruisse*.——————

Printed in the Year MDCLXXI.

BEWILA

VAO

BOCOW-ISCG

TO THE

READER.

Reader,

YOu are to take notice that the Author whensoever he names his Adversary hath chosen rather to affix a *Black line*, than to give him the Title of *Doctor*: not out of any *contempt*, or that he would deny him what is his *due* and *right*, though by *PURCHASE*: but he could not be any way informed that *he* was any *Graduate*, though he write himself *M. D.* nor do any of the *Colledge* own any such thing. As for what is said, that *He purchased a DOCTORAL DIPLOMA to justifie his practice* Legally *in any place of the world. H. S.* professeth he doth not understand whether this import any more than a *LICENCE to PRACTISE*, which looseth much of its *validity*

validity and *repute* by being a *CONFESSED PURCHASE*: As for *DOCTORAL Diploma's*, he never heard they were *any where* to be *purchased* without taking of the *Degree*, and in *that manner* it may be *purchased*, it being usual at *Leyden* and *Padua* to sell *them*, with this Elogy: *Accipiamus pecuniam, & dimittamus Asinum.* If it be *due* to *him*, the *Reader* may supply the *blank* with what is *fitting*, and term him either *Mr. Thomson*, or G. *Thomson the DOCTOR BY PURCHASE.*

Yours

H. S.

TO

TO THE

Learned and Judicious Preſident and Fellows of the Kings Colledge of *Phyſicians* in *LONDON.*

SIRS,

THat *there are certain* periodical *revolutions in Nature, whereby the ſame* calamities, diſtractions; *and* diſeaſes *renew themſelves, and afflict man-kind over and over again, hath been the ancient obſervation of* prudent men. *Agreeable hereunto it is, that in* our Age *we ſee the contempt of* Ancient Learning *revived*; *and experiment a new inundation of* Goths *and* Vandals *amongſt us, but not likely to be ſo famed as the* former, *for* Civil prudence, *and* Military conduct. *But as they bear a great reſemblance to thoſe* Barbarians, *in demoliſhing* old Structures *and* Books; *ſo herein they out-doe* Theodoric, *in that* they *promote a* Licentiouſneſs of Experiments *in* Phyſick, *which that wiſe* Goth *ſeverely forbad, out of tender regard to the* welfare of his Subjects, *in the loſs of whom,* Princes *themſelves become* Sufferers. *When the* Europæan *Chri-*

Caſſiodor.

Christians were reduced to their greatest ignorance, *and* rudeness, *they retained so much of* sense *as to apprehend* this evil ; *and to remedy it, and to furnish themselves with able* Physicians *in* difficult cases (*in the more* facile *men, are less sensible of their* want) *they erected* Physick *into a* Faculty, *graduated the* Doctors, *and did* subordinate *the* Apothecaries *unto* them, *and left every* practitioner *punishable* lege de sicariis, *or by some* extraordinary penalty, *under whom any patient should* dye, *if the* traditions of our Art were not observed, *but the* Method, *or* Medicaments *found* unwarrantable. *What* Henry *the* eighth *did in modelling your* illustrious *Colledge, was but an* imitation *of these* Sage *Constitutions, which* (*descending from the Emperour* Frederick *the second, in* 1221.) *all* Europe *had submitted unto : These the* King *professeth to take for his* example, *and the motive* he *went upon was, a* regard to the benefit of his Liege-people ; *as our* Law *sheweth. The event of which* determination *was such as demonstrated it to be highly* prudential : *it gave such a* lustre *and* encouragement *to* Physicians, *that the* profession *became* splendid *for the* number *and* quality *of such as embraced it, and added as much to the* glory *of our Nation, as it brought* other benefit. YOU, *as well by your* own merits, *as the appointment of our* Monarchy, *are the great* Tribunal

Jo Francis Ripa tr. de pest. c. 7. sect. 64 65. *Peter Rebuff* digest. l. 1. tit. 18. leg. 6. sect. 1.

of

of our Faculty: *upon* YOUR SENTENCE, *in difficult caſes*, we *depend*; *To* YOU, *we are referred, as the* ſupreme Judges of our Methods *and* Medicaments: *'Tis our* Glory, *'tis our* Security, *to be* your followers, *and that which* crowns *all our practice is, to be at laſt of* YOUR NUMBER. *But the* innovations *of late years have taken off much from* your renown *and* Authority; *and though* YOU *have in* abilities *equalled or tranſcended* your Anceſtours, *yet hath your* Credit *been* extenuated *and* impaired: *which is ſo much the more to be reſented, in that it aroſe not from any evil effect of our late* Civil Wars, *but the* inſolence *and* extravagance *of more* modern *attempts. Others, contrary to* our Laws, *have uſurped* YOUR OFFICE, *pretending to reform the* Ancient Rules, Methods, *and* Medicaments, *and giving encouragement to all manner of* Empiricks *and* Quackſalvers, *ſo that the* Faculty *is in danger to be overthrown, anil the Nation to be ſubjected to all thoſe inconveniencies which the defect of* able Phyſicians, *and the multiplying of cheating* Mountebanks *can introduce*: *and when ſome years ſhall have* removed *or* extinguiſhed *the preſent* Phyſicians *and* Chirurgeons *which are* eminent, *ſcarce any* County *will yield* one *fit to be conſulted with in* difficult Caſes. *All this miſchief hath its principal* ſource, original, *and* ſtrength *from the*

BACONICAL PHILOSOPHERS, *and the impudence of*------- Thomſon *proceeded ſo far as to decline* Your Judicature, *and appeal to* theirs *in matters relating to the* practiſe *and* being *of* Phyſick: *Though the* Man *be* deſpicable, *the* Preſident *is not*: Examples *ſtick not where they* begin; *and from as* trivial *a* riſe *as this, I have obſerved, that the* priviledges *of greater* Courts *have been infringed, and others from* non-judices *advance themſelves to become* Judges, *where they ought not to* interpoſe. *This conſideration, and not any* value *I place on my* Adverſary, *made me employ ſome of that* little leiſure *which I have, in contriving a remedy for this growing evil; and I concluded that it might adde ſomething to your* grandeur; *if I deſcanted upon the miſcarriages of the Lord Chancellour* Bacon; *and in* him *ſhewed what* incompetent Judges *they are in* Phyſick, *either as to the* ſtating of a diſeaſe, *or* recording its cure, *who are not* perfect Artiſts, *and accompliſhed in our* Science, *whatever* excellencies *they have otherwiſe acquired, and what* ingenuity *ſoever* nature *may have beſtowed on* them: *In repreſenting of his* faileurs, *I thought I might deterr others from the like attempts, who are not* Bacons, *but* Hogs, *that yield* much Cry, *but* no Wool.. *As for the ſuppreſſing of* Mountebanks *and* Empiricks *of leſſer note, I think the moſt ready courſe would be to acquaint*

the

the Nation with the Hiſtory *of the* Faculty of Phyſick, *the* Laws *made about it in ſeveral Countries, the* motives *inclining Princes thereunto: the* Edicts *againſt* Empericks *made by King* John, *and* Charles *the ſixth in* France, *and others elſewhere: as alſo the* diſmal effects *which followed all over* Europe, *after that* Paracelſus *and his followers had decryed the* eſtabliſhed Phyſick, *and introducing new* terms, principles, methods, *and* medicaments, *and imboldened every* Mountebank *to make trials with his* Arcana. *This* Courſe, *I think, would beſt undeceive the* people, *and make them* cautious, *willing to learn by the* ſad examples of what others have ſuffered, *and to purſue thoſe* remedies *by which they have been* relieved. *And it would incline the* Parliament *to paſs thoſe* Acts *by which the* Faculty *may be ſupported, and all the* rational Phyſicians *in* England *imbodied into one* common intereſt, *and* mutual dependance; *whereby it will be facile for us to advance the* Science *to that* height *and* uſefulneſs *whereunto no other* contrivance *can bring it; and to ſecure not only* our ſelves, *(and that* Profeſſion *which is and will be an* ingenious education *and ſubſiſtence for the* younger Gentry) *but alſo* Learning *it ſelf from* apparent deſtruction. *I ſhould expatiate too much in this addreſs, ſhould I propoſe the*

wayes

wayes of advantaging Phyſick, *and the moſt* feaſible projects *for the carrying them on: But I beſeech you to believe, I bring along with me in* this addreſs *all that* reſpect, *all thoſe inclinations to* ſerve you, *which become the moſt affectionate of* your friends, *and particularly*

Warwick *Jan.* 12. 1670.

Your moſt devoted ſervant

HENRY STUBBE.

THE LORD *BACON'S* RELATION OF THE *SWEATING-SICKNESS.*

" ABout this time in *Autumn*, towards the end *Hist. Hen. 7. p. 9. take notice that this Book hath no Index.*
" of *September*, there began and reigned in
" the City, and other parts of the Kingdome,
" a *Diſeaſe* then *new*: which, of the Acci-
" dents, and manner thereof, they called the *Sweating-*
" *Sickneſs.* This diſeaſe had a ſwift courſe, both in the
" *ſick body*, and in the *time* and period of the laſting there-
" of: for they that were taken with it, upon four and
" twenty hours eſcaping, were thought almoſt aſſured.
" And, as to the *time* of the malice and reign of the *Diſ-*
" *eaſe*, e're it ceaſed; it began about the one and twentieth
" of *September*, and cleared up before the end of *October*,
" inſomuch that it was no hindrance to the Kings *Coro-*
" *nation*, which was the laſt of *October*: nor (which was
" more) to the holding of the *Parliament*, which began
" but ſeven dayes after. It was a *Peſtilent Feaver*, but
" (as it ſeemeth) not ſeated in the *veins* or *humours*,
" for that there followed no *Carbuncle*, no *purple* or *livid*
" *ſpots*, or the like, the Maſs of the body *not being taint-*

" *ed*: only a *malign vapour* flew to the *Heart*, and seized
" *the vital spirits*; which stirred nature to send it forth by
" an *extream sweat*. And it appeared by experience, that
" this Disease was rather a *Surprize of Nature*, than *obsti-*
" *nate to Remedies*, if it were in time looked unto. For,
" if the patient were kept in an *equal temper*, both for
" clothes, fire, and drink, moderately warm, with *tempe-*
" *rate Cordials*, whereby Natures works were neither ir-
" ritated by *heat*, nor turned back by *cold*, he commonly
" recovered. But infinite persons died suddenly of it, be-
" fore the manner of the *Cure* and attendance was known.
" It was conceived not to be an *Epidemick* disease, but
" to proceed from a *malignity* in the constitution of the
" *Air*, gathered by the pre-dispositions of the seasons:
" and the speedy cessation thereof declared as much.

I Shall not here transcribe all that I writ against the *Historiographer* of the *Royal Society*: some thereof relating more to the *particular* faileurs of Dr. *Sprat*, than the *mistakes* of the Lord *Bacon*: Indeed the errour of that *Virtuoso* was such in *that case*, that 'tis scarce imaginable how a man could be guilty of it, and pretend to common reading: Those that I am *now* to insist on, are such as *peculiarly* refer to the Lord *Bacon*, and argue his *ignorance* in *Physick*. And although it may be said in *his behalf* (as I observed) that in an *Historian* we are not to be *critical* for every *punctilio*, not relating to his *main design*, yet I think 'tis but just to demand, that *what he doth write be true*: And although cases in *Physick*, no more than cases in *Law*, are to be determined out of vulgar *Historiographers*, but *Authentick records* penned by *Artists*; yet since the repute of my *Lord Bacon* is great in *this Age*, and made use of to the prejudice of *Our Faculty*, more wayes than *one*; and since my *Adversary* pretends to justifie the *exactness* of the *account afore-mentioned*, I shall recollect my Exceptions against it, and then consider what *he* sayes in his *defence*.

I complain'd that the relation is *defective* in sundry *material* circumstances, as to the *Type*, or description of the *Disease*; and as to its *Cure*.

He sayes no more of its *Type*, then that It was a Pestilent Feaver, terminating in twenty four hours, without any Carbuncle, or purple and livid spots, or the like: wherein a malign vapour flew to the Heart, and seized the vital spirits, which stirred nature to send it forth by an extream sweat. Whereas it seized upon them with a *violent heat*, and *incredible anxiety* about their *stomach and head*; and *insatiable thirst*; and the *sweat* which ensued was *noysome* and *stinking*. This appears not only out of *Polydore Virgil*, and *Hollinshed*, but such *Physicians* as writ of it, and are alledged by me: to which I add, the Authority of *Wierus*, who wrote an excellent *discourse* of *it*, and having related the *Type* of it agreeable to what our *Records* declare, he adds, that in *Germany* it began with a *chilness* and *shivering*, which continued *half an hour* or more, and with great pains about the *diaphragme* and *groyn*, *palpitation of the heart*, *sudden debility of strength*, *so that the patient could scarcely stand on his feet*: *sometimes it seized them with a* Giddiness, *and pain in their heads*; *and sometimes* (*though seldome*) *they vomited up black blood*, *or choler*: Also, *that in the beginning of the disease*, *the patients hands were swelled and stiff*. I added out of *Septalius*, that the *Urine* in that disease was commonly *livid* and *putrid*; that some *pissed blood*, others did *void blood at their noses*, *and even ears and eyes*. In fine, the *Type* of it is thus described by *Carolus Valesius Dubourghdieu*; "*Pestis hujus* '*symptomata erant lipothymia*, *virium languor*, *oris ventri*- '*culi morsus*, *anxietas*, *cephalalgia*, *pulsus creber*, *celer & in*- '*æqualis*: *denique sudor graveolens toto corpore emanans*. '*Nec inter Ephemeras censeri poterat*, *licet viginti quatuor* '*horarum flexu deferveseeret*, *cum largissimus ille*, *& fœtidus* '*sudor*,

Joh. Wierus *observat. l.* 2. de *Sudore Anglico*, sect. 8. *and* sect. 14. *Signa morbi hujus-- breviter talia sunt*, *Frigus & horror*, *sudor fœtidus cum magna angustia & caloris sensu circa cor & pectus*, *& præcordia*, *etiam palpitatu cordis*, *& calor*. *Rubor & tumor faciei*, *cum dolore capitis*: *multi etiam dolore lumborum teneantur*, *alii ventris*, *alii stomachi*: *alii aliis in partibus dolores percipiunt*.

Ludov. Septal. *de peste. l.* 1. *c.* 21.

Carolus Valesius Dubourghdieu *de peste*, *c.* 14. *p.* 227. *This book also hath no* Index.

"*ſudor, non tantum ſpiritus accenſos, ſed etiam humores pa-*
"*tredinem concepiſſe argueret, qui nimirum maxime naturæ*
"*adhuc robuſtæ & laceſſitæ impetu pellerentur.* I more willingly cite ſuch Authors *as I mentioned not before*, to the end that the *Virtuoſi* may be more aſhamed of that prodigious errour which they committed in that *Hiſtory* of theirs. *Eraſmus* gives this relation of it; "*Non aliud*
"*malum horribilius, nec contagium periculoſius, habet tamen*
"*illud boni, quod non excarnificet hominem diutinis cruciati-*
"*bus, intra duodecim horas, interdum intra pauciores aut tol-*
"*lit hominem, aut certam vitæ ſpem præbet: atque initio qui-*
"*dem, ut fit, feſtino, affligit ſudore, ſed igneo, odoris teter-*
"*rimi: viſum eſt ex amne* Phlegetonteo *emiſſum hoc ma-*
"*lum. Ungues potiſſimum excruciat, alas ita comprimit, ut*
"*etiamſi velis, non poſſis attollere. Qui fervoris erant im-*
"*patientes, & auram largius admittebant, hi fere ſubito*
"*extincti ſunt: rurſus alii cum animadverterent, id com-*
"*pluribus infæleciter ceſſiſſe, dum in diverſam tendunt ra-*
"*tionem, in idem tum exitium inciderunt: nam occluſis ri-*
"*mis omnibus, & excitato igne copioſo, opertique ſtragulis,*
"*quo magis tutiuſque ſudarent, æſtu præfocati ſunt. Præſen-*
"*tius tamen exitium adferebat admiſſum frigus: tandem*
"*reperto temperamento multo plures ab eo morbo convalue-*
"*runt, quam extincti ſunt: tamen tanta lues, nondum eo*
"*tempore invenit nomen, nec ullum efficax ab arte medica*
"*remedium hactenus repertum eſt.*

Deſcribit hanc peſtem Eraſmus *harum calamitatum ſpectator, in epiſtola ad* Carolum Utenhovium; *citante* Forreſto, *in Schol. obſerv. 7. lib. 6. &* Carol. Valer. *ubi ſupra.*

Theſe defects are in the *Type of the diſeaſe*: and in relation to the Cure, 'tis ſaid by *him*, that **Nature did diſcharge it ſelf of the malign vapour by an extream ſweat.** I obſerved that to be directly contrary to what is recorded by others *about it*, which is manifeſt out of *Caius*, *Forreſtus*, *Eraſmus*, *Sennertus*, and others that relate the *diſeaſe*. I ſhall here add *Wierus*, who ſayes, "*Sed*
"*præſertim magna cura eſt adhibenda, quando æger ſub invaſionem morbi è veſtigio calefactum lectum ingreditur, &*
"*ſtragulis, ad evitandum frigus ambiens tegitur, ne ſtragulis nimium oneretur: recordor enim, quod multi à ſtragulo-*
"*rum*

J. Wierus, *ubi ſupra.* ſect. 9

'*rum pondere nimio fuerint excalefacti, ſuffocati & mortui*
'*fuerint.* ------ In like manner writes *Cornelius Gemma.*
'*Nec te præteribo heu nimirum dira mortalium lues, cui*
'Sudoris Anglici, *vel* ἱδρωτικὴ, *nomen ab ipſa ſymptomatis*
'*ſpecie indiderunt. Orta eſt hæc anno* 1529. *circa æſtatem*
'*poſt humidiſſimam cœli conſtitutionem ut à patre piæ me-*
'*moriæ* (*qui & eundem morbum paſſus eſt tum temporis,*
'*evaſitque fæliciter*) *ipſius audivi. Primum vero ex* Bri-
'tannicis *locis terras maritimas* Hollandiæ, Zelandiæ *per-*
'*vagata*, Antverpiam *venit, ac celerrime in* Flandriam,
'*totamque* Brabantiam *ſparſa, uno die ſudoris infanda eluvie*
'*hominum vel multa millia ſuffocabat. His aderat ea de-*
'*mentia, ut ſeſe lectis & linteis inſui paterentur, omni arte*
'*ac vi eliciendum ſudorem arbitrati: Heu nimis immemores*
'*Hippocraticæ voces, qua ſic ait*: Si talia purgantur, qua-
'qualia purgari oportet, confert ac facile ferunt; ſin mi-
'nus contra. *Imo interea dum alter alterum ſtrangularet,*
'*qui præſentes aderant, mutuo adhortabantur; ne ſe negli-*
'*gerent, vigente morbi fecia, nec victi pretio, aut precibus*
'*ſe ante tempus liberent. Verum quando ad illos ordo per-*
'*venerat, ut ſudandi tempus videretur, conſuti ſimiliter,*
'*& violenter operti clamitabant miſere, obteſtabantur deum*
'*atque hominum fidem, ſeſe dimitterent, ſe ſuffocari injectis*
'*molibus, ſeſe vitam in ſummis anguſtiis exhalare. Sed aſ-*
'*ſiſtentes, has querelas ex rabie proficiſci Medicorum opini-*
'*one perſuaſi, urgebant continue, uſque ad viginti quatuor*
'*horas, id enim erat ſudandi ſpatium præfinitum, ante cujus*
'*circuitum evaſere quam pauciſſimi: Tertia mortalium pars*
'*errore proprio atque inſania miſere ſtrangulata eſt.*

Vitaque cum gemitã fugit indignata ſub umbras.

He ſpeaks of its original *in relation to* Germany, *where it firſt appeared at* that time.

Cornel. Gem. *Coſmocritic. l.* 1. *c.* 8.

The ſame is avowed by *Lævinus Lemnius*, whoſe diſcourſe I will alſo tranſcribe. "'*Ad febrem ephemeram*
'*ſive diariam referri debet* Sudor Britannicus, *cujus morbi*
'*ſymptoma ſeu accidens eſt Cordiaca ſyncope, vel animi defe-*
'*ctus, qui ex ſtomachi morſu contractus, non minori affectu*

Lævin. Lemnius, *de complexion. l.* 2. *c.* 2. fol. 110, 111.

'*hominem*

'*hominem conficit, quam si cor vitæ fontem halitu contagioso*
'*forinsecus ingruente, opprimi contingat: quod observatum*
'*est anno* 1529. *mense* Septembri *in pestilenta Ephemera,*
'*quæ ex aeris contagio exorta totam* Belgicam *invasit magno*
'*terrore, animique deliquio & palpitatione cordis. Cui hoc*
'*accessit incommodi, quod Empirici quidam præter artis ra-*
'*tionem, nec observatis naturæ viribus, duodecim horarum*
'*spatio in sudore ægrotos violenter continerent. Quum autem*
'*aer vitiatus infectusque hinc malo seu ephemeræ febri cau-*
'*sam prebeat, symptoma vero atque accidens, quod comita-*
'*tur, ut umbra corpus, Cordiacus sit affectus, atque animi*
'*deliquium, tum sudor ipse Crisis statuitur, quo naturæ ro-*
'*bur excussa madida olentique fuligine, morbum discutit,*
'*quocirca necesse est moderatus is sit, nec quatuor aut sex*
'*horarum spatio productior, pro virium imbecillitate & ro-*
'*bore: immodices enim vires dejicit, ac spiritus vitales de-*
'*populatur, Quod autem morbus hic* Britannicus *dicitur,*
'*vel* Sudor Anglicus, *hinc enatum ominor, quod in ea regi-*
'*one populares frequentius illo, corripiantur, partim ob ope-*
'*rosas lautasque mensas, ac ciborum affluentiam, qua illos*
'*distendi contingit, ut* Germanos & Belgas *potu, partim*
'*(ut superiore anno à me observatum est ipso etiam Solstitio*
'*æstivo) ob aerem turbulentum ac nebulosum, densaque ca-*
'*ligine passim offusum, quo fit, ut concepta intus & foris mor-*
'*bi causa atque origine, non sine sanguine & sudore cum illo*
'*colluctentur, quasi cum valido & præferoci hoste certamen*
'*sit initum, quem summis viribus excussisse laborent, hinc*
'*corporis animique defectus & deliquium, hinc spiritus*
'*languidi & collapsæ vires, hinc intercepta voce occlu-*
'*sisque spirandi fistulis, vitæ propemodum interitus atque*
'*exanimatio.* ------ This being the judgment of *all Phy-*
sicians that write of *it*, and agreeable to the tradition of all *Historians*; I do not doubt to record the *contrary re-*
port thereunto for a *fundamental* errour in order to the **cure.** I farther observed, that whereas the *others* direct, that that the sick party, *if dressed in his clothes*, should immediately lye down in them, without adventuring to *dis-*

robe

robe himself: this circumstance, though of *extraordinary importance* (as appears by those *Chronicles* I cited, and other writers) was *totally* omitted by my Lord *Bacon*: and that great caution of *not putting the hand or foot, or any part of the body out of bed, or into any cool place*, is not sufficiently expressed in that assertion, that *they ought to keep themselves in an equal temper, both for clothes and fire.* Yet is this observation so considerable, that *all severely inculcate it*, as being *absolutely necessary to the recovery of the sick*: and so strict were the *Physicians* herein, that *Wierus* saith, for *this cause* he could not observe the *pulse*, or *urine* of the sick, till the *declination of its violence.* No less imperfect is that *general intimation* of my Lord *Bacon*, that they were to keep themselves with *drink moderately warm, and temperate Cordials, whereby natures work be not irritated with heat, nor turned back by cold*: as any man will see, who consults *Caius*, and *Wierus*, and others. Another omission of my Lord *Bacon*'s was, That *he forbids not the patient to sleep during the disease*; whereas I observed out of *Cogan*, If they were suffered to sleep, commonly they swooned, and so departed, or else immediately upon their waking. Which caution is ingeminated by *Wierus*, " *Quamdiu durat vis* ' *sudoris fætidi, nec manus detumescunt, nec symptomata* ' *cessant, oportet à somno abstinere, eique resistere vel piis* ' *colloquiis, vel aliis licitis mediis.* In all *pestilential feavers* we are *usually* cautious how the patient *sleep*, till the *venome of the disease* be somewhat driven out and abated: and so in such *feavers* as are *Cordiacal*, and attended with *fainting fits*, malignity encreaseth, and diffuseth it self insensibly into the *principal parts* during sleep.

J. Wierus, ubi supra, sect. 15.

Tho. Cogan's Haven of health. p. 272.

J. Wierus, ubi supra, sect. 10.

As to the *name* of the *disease*, and under what *species* of feavers it was to be reduced, the *Physicians* could not agree in those dayes: nor whether the *sweat* it self were *symptomatical*, or *critical*; for though *all that recovered* did recover by *sweating*, yet all that had the *disease* did not *sweat* (such dyed) and if it were *symptomatical*,

yet the *evacuation* was of *that nature*, that it ſeemed agreeable to the Rules of *Phyſick*, neither to *ſtop it*, not yet to help it, but only to *continue it*: and if it were *Critical*, it was to be *continued onely*, in like manner; and nature not to be aſſiſted, or *vigorated*, beyond what was *neceſſary*. It being our Aphoriſm, *Quæ judicantur, & judicata ſunt integre, neque movere, neque novare, neque pharmacis, neque aliis irritamentis, ſed ſinere.* But though they had *theſe controverſies* amongſt them, yet I do not find this to be one; Whether that the Feaver or Peſt did conſiſt in a vapour afflicting only the vital ſpirits? "*Cum enim eam ſudores copioſiſſimi, & multa peſſima ſymptomata comitata ſint; inde facile colligere eſt, ſpiritus non ſolum incenſos, verum & ipſos humores ac calidiores affectos & corruptos eſſe. Et licet viginti quatuor horarum ſpatio hæc febris ſolveretur: non tamen ideo ad Ephemeras referenda eſt, ſed inde potius maxima inter naturam & inter peſſimum morbum colligitur pugna.* So *Wierus*, though he hold that it ſeized firſt on the *vital ſpirits*, yet avowes, that the *maſs of blood* was *alſo* corrupted by the *peſtilent venome*: Nor can any man doubt it, who conſiders but the *Type* and *Symptomes* of the Diſeaſe, which I *formeriy*, and now *again* have repreſented, as alſo the precedent ſeaſon of the year. And I could not but ſmile at the *reaſon* given by my Lord *Bacon*, to ſhew that the *peſtilent feaver was not ſeated in the veins or humours*, nor *the Maſs of the body tainted.* Becauſe there followed no Carbuncle, no purple or livid ſpots, or the like. For there are many *peſtilential diſeaſes* recorded, in which the *maſs of the bloud and humours* are infected, and yet there are no ſuch *ſymptomes* enſuing, as this Lord ſpecifies. Such was the diſeaſe called *Coqueluche*, or *Morbus Arietis*, and *Catarrhus Epidemius*, in the year 1580. which over-ran all *Europe*, and of which ſundry Authors have written: ſuch were the *peſtilent pleuriſies*, *peſtilent pleariticks*, and peſtilent *peripneumonies*, *dyſenteries*, *worms*, *ſmall pox*, of which our *Phyſicians* give us large ac-

Valleſ. method. medendi, l. 2, c. 53.

Hippocr. Aph. ſect. 1. aph. 20. *cum notis* Valleſii.

Sennert. de febr. *l.* 4. *c.* 15. *de ſudore Anglico.*

J. Wierus, ubi ſupra. *ſect.* 7.

accounts : and in the Hiſtories of ſundry *Camp-feavers*, being *peſtilential*, and infecting the *humours* and *maſs of bloud*, you may often read how *none of theſe cutaneous eruptions* were obſerved : no 'tis not conſtant in the *Hungarian*, or *ſpotted feaver*, that they appear. Neither is there any thing more *true*, than what *Maſſarias* layes down. " *Etſi diximus & peticulas & cæteros decubitus* " *propria eſſe ſigna fere febris peſtilentis, tamen id Sciendum* " *eſt, neque id generaliter verum eſſe, neque hujuſmodi* " *ſymptomata illis propria & inſeparibilia eſſe : Siquidem ex* " *una parte nonnunquam evenit, ut in febre manifeſte peſti-* " *lenti, ac forte cæteris maligniore, neque papulæ, neque tu-* " *mores, neque ulla naturæ depulſio conſpiccatur : ex altera* " *autem ut non ſolum in ſimplici febre, ſed etiam ut placet* " *Altio & multis, qui id confirmant verum eſſe, ſine febre* " *interdum compareant & maculæ, & alia id genus ſympto-* " *mata, quæ ab omni peſtilentis affectus ratione ſunt aliena, &* " *nullum periculum afferunt.* In fine, *How often doth every* practitioner *ſee, that thoſe* purple *or* livid *ſpots do not appear till after the party is deceaſed*? And when they do appear, 'tis a *Queſtion* with me, *Whether they argue ſo great an infection in the maſs of bloud and veins*, as my Lord intends, ſeeing they have their *original* from the *bones*, and thence riſe up to the *skin*, *pyramidally*. " *Ja-* " *cobus Bontius —— cadaver cujuſdam qui exanthematibus* " *hiſce laborarat, diſſecuit, invenitque ab oſſibus ipſis initium* " *ſumere ea, incipereque à latiori baſi, pyramidiſque inſtar* " *aſſurgere, ac tandem in ſummo cutis in conum deſinere.* And this doubt of mine is confirmed unto me, by ſundry reaſons, which may be ſeen in *Iſbrandus à Diamerbrook*.

Alexand. Maſſarias de febr. *c.* 24.

Heuricus Florentius in *Petr. Paaw* de peſte, *c.* 4. *p.* 72. *This book hath no* Index.

Iſbr. à Diemerbrook de peſte, *lib.* 1. *c.* 14. *p.* 19. *edit. ultimæ.*

The Lord *Bacon* concludes his *Narrative* with a paſſage ſo *ridiculous* and *abſurd*, that ſo *groſs* an opinion is enough to extenuate his *judgment in Phyſick*, and convince any man, that he had *little* inſight into thoſe ſtudies. " *It was conceived not to be an Epidemick diſeaſe,*

'*but to proceed from a malignity in the constitution of the* '*Air, gathered by the prediſpoſitions of the ſeaſons.* As if *Epidemical diſeaſes, and diſeaſes from the conſtitution of the Air*, were contradiſtinct; and that *none of the former* could ariſe from *infection*, or *corruption of the air*: The opinion is ſo *falſe*, and *univerſally known to be ſo*, that it needs no *refutation.*

Vide Valleſium *in præf. comment. in Epidemia* Hippocr. Ruland. *de febre* Hungar. *c.* 8. *qu.* 1. Fernel. *de morb. occult. lib.* 2. *cap.* 11. Jul. Palmar. *de Febre peſtilenti, c.* 2. Ludovic. Septal. *de peſte, lib.* 1. *c.* 2. Neucrahtzuyn *de Purpura, c.* 9. *pag.* 106. Zacchia. *qu. medico-legal. lib.* 3. *tit.* 3. *Qu.* 1. *ſect.* 23. Mercatus *de febr. l.*9. *c.*1. Anton. Sarracen. *de peſt. nat. pag.* 6, 7, 8. Th. Jordan, *de peſt. phænom. tr.* 1. *c.* 2.

Having premiſed *theſe things* for the better underſtanding of the preſent Controverſie, (moſt whereof were ſet down before in my *Animadverſions*) I now come to conſider the *Defence* which ------ *Thomſon* makes in behalf of the Lord *Bacon*: and I find it ſo *defective*, that of all the *Exceptions* I have brought, only two are controverted; the reſt are paſſed by in a *profound ſilence*, by my *talkative* Antagoniſt.

The firſt is, as to the *Cauſe of the Diſeaſe*, that It conſiſted in a malign vapour, flying to the heart, and ſeizing on the vital ſpirits, which ſtirred Nature to ſend it forth by an extream ſweat.

The ſecond, that The proper cure of the Sweating-Sickneſs, conſiſted in extream ſweats.

p. 16. To the firſt, ----- *Thomſon's* reply is, "'*The material* '*cauſe of this truculent diſeaſe, propoſed by him is, a* malig-'nant vapour, *i. e.* Gas ſylveſtre, *an incoercible ſpirit,* '*which by reaſon of its ſubtilty, reſembling the vital ſpirits,* '*could readily mix it ſelf with them, forthwith infecting* '*the ſame, eſpecially thoſe about the heart; whereby the* '*plaſtick power of the* Archæus, *as an efficient cauſe, the* '*the perfect* Idæa, *or image of this ſpecifick diſeaſe is pour-*'*trayed, part of the* vital ſpirits, *being, as it were tinged* '*by the intermixture of theſe* contagious particles, *and part* '*remaining in its integrity, being exaſperated at the pre-*

'*ſence*

'*ſence of ſuch an hoſtile intruder, ſtirrs up nature*, i. e. '*muſters up all the faculties, forces, or ſtrength belonging to* '*the* ἴνορμον, *or* Archæus, *and withall ſummoning the* Latex, '*or* Lympha, *to be aſſiſtant to the ablution and ablation of* '*this* fermenting, malign impurity, *which is ſent forth by* '*an* extream ſweat. *The inward procuring occaſional ex-* '*citative cauſe was a* peſtilent venome, *a* tabefying mat- 'ter, *immediately lodging in the degenerate juyces about the* '*ſtomach and ſpleen* (Helmont's duumvirate) *not in the* '*veins or fictitious humours, which, ſending forth fetid pu-* '*trefactive particles, annoying the* Archæus, *cauſed an in-* '*dignation, or fretting diſpoſition, at preſence of that which* '*is altogether* Exotick, *and incongruous with nature: whereupon thus put upon the ſtreſs, it exerts all its power* '*and faculties to the expulſion of ſuch a virulent Gueſt, per-* '*formed moſt conveniently by* large ſweats, *before which,* '*there muſt neceſſarily precede a feaver, from the colliſion,* '*conglomeration, tumult, and confuſion of the* vital ſpirits '*thus aſſaulted; as is frequently obſerved to fall out, when* '*any extraneous thing to* Life *getteth into the* fleſh, *to wit,* '*a thorn or ſplinter: ſo that a feaver is but a conſequent* '*of the fury and rage of the* Archæus, *and a precedent of* '*the expulſion* of the ὕλη νοσερὴ, *the matter of the diſeaſe.*

I ſuppoſe it ſhould be τὸ ἐνορμῶν.

In this diſcourſe there are ſo many *un-intelligible canting terms*, that to ſpeak *well* of them, a man muſt be a *Virtuoſo*: for that *kind of men*, being obliged by their *conſtitution* to be very *civil* one to the *other*, will beſtow the *Elogies* of Learned and Ingenious, upon the moſt *ridiculous* ſpeaker that ever opened *his mouth* amongſt *them.* The turning of a malignant vapour into Gas Sylveſtre, and making them *ſynonimous*, is an unpardonable errour in the *Helmontian* Phyloſophy, which makes the *Gas* and vapour to be *diſtinct* things in nature. "*Itaque* Gas *diſtinguitur à* vapore, *quod in hoc ſal* '*aſſurgat cum mercurio, & habeat ſulphur incluſum*; Gas '*vero ſulphur extravertit atque ſubdividit.* The *plaſtick power* of the *Archæus* are empty words, and more *difficult* ex-

Grembs Arbor integr. & ruinos, lib. 1. c. 6. de meteoris, ſect. 2. ſect. 5.

expreſſions than ever poor *Ariſtotelian* uſed. The whole *paragraph* is nothing but *jargon* and *non-ſenſe*, yet ſuiting to the revocable *Hypotheſy* of this Age. The *juyces in the ſtomach were not degenerate*; ſeeing that the *diſeaſe* did invade the moſt *youthful* and *healthy*. His placing of the *infection* in the degenerate Juyces of the Stomach and Spleen, and *Latex*, (another *canting term*) is contradictory to what the Lord *Bacon* ſaith, that *the malign vapour did flye to the heart, and ſeized the vital ſpirits*, and not the *maſs of blood*, or *other groſſer juyces*, called *Humours*. Oh moſt *excellent Advocate*, and *Baconical* Philoſopher! If it did not invade and affect the *blood*, how came thoſe *ſanguinary evacuations*? 'Tis to no purpoſe to reply, that the blood and other humours (which compoſed that fetid ſweat, and occaſioned the heat, *thirſt*, and other ſymptomes) were only *ſecondarily* affected; for *then* in the *declination of the diſeaſe*, there muſt have been Carbuncles or ſpots, according to that Judicious Hiſtorian. I think the *Galeniſts* give a better account of *it*, when *they* ſay, that a *particular venome*, or peculiar kind of *ſuperlative putrefaction*, *did at that time infect the air, which, encountring bodies prediſpoſed to ſweating-diſeaſes, by the heat and moiſture of the preceding year* (ὁπόταν δὲ θέρος γένηται ἔαρι ὅμοιον, ἰδρῶτας ἐν τοῖσι πυρετοῖσι προσδέχεσθαι χρή, *Quando æſtas eſt ſimilis veri, tum ſudores multos in febribus expectare oportet*) or perhaps by *celeſtial influences*, *occaſioned that diſeaſe*: whereof the Cure was to be learned (it being a *new diſeaſe*) from the obſervation of that courſe by which Nature did eaſe it ſelf: for of all the *venenate qualities* which, *by infection of the air* or *diet*, are *ingendred* and *commixt* with the conſtitutive parts of men, ſcarce *one* produceth the *ſame ſymptomes*, or is cured the *ſame way* by which *another* is. Thus ſome *ſpotted feavers* have been cured by *fluxes*, others by *ſweat* and *urine*: ſome have had their *critical motions*, others have been ſo *malignant* as to admit of no ſuch *periods*, or *delayes*: And hence it is, that very eminent *Phyſicians* have not reſtrained the name of *Plague*

Hippocrat. ſect. 3. aphor. 6. Langius ep. med. l. 1. ep. 19.

to

to any one *form of diſeaſe*, but left it *unconfin'd*. In this *diſeaſe*, ſince none recovered but by *ſweat*, and moſt recovered that were *ſweated moderately*, (according to the relations given) it was their buſineſs to promote *Sweat*, and therein to ſhew themſelves *ſubſervient to nature*: and herein the latter part of my Lord *Bacon*'s account agrees with that of the *Phyſicians*: viz. To keep the patient in an equal temper, both for clothes, fire, drink, moderately warm, with temperate cordials: though it be *moſt falſe*, that Nature was ſtirred to caſt forth the venome by extream ſweats: for ſuch dyed; and therefore ſuch emotions muſt have been the conſequence of *Nature*, erring through a *virulent irritation*, or fainting under a *putrid exolution*. As for the compariſon betwixt this *venome* or *Gas* (which —— — *Thomſon* underſtands not what it is, being ignorant in his *own principles*) and a *thorn* or *ſplinter*, 'tis moſt *abſurd*: for thoſe occaſion only *ſymptomatical Feavers*; theſe *venenate acrial* or *dietetical poiſons*, produce *originary* and *real feavers*; they are intimately commixed with the *maſs of bloud and humours*; and as in *fermenting Wine* or *Ale*, the incoercible *Gas* hinders not the *purification* and *generation* of thoſe *generous liquors*, ſo neither would it *here*: but 'tis rather like thoſe *ferments* or *mixtures* which corrupt the *Wine* or *Ale* ſeveral wayes, according to their *ſeveral natures*, but are not comprehended under the name of *Gas peregrinum & ſylveſtre*. But I will not give my ſelf the trouble of inſtructing theſe *ignorant Baconical Virtuoſi*: 'tis an *endleſs work*: 'tis enough that *Helmont* ſuppoſeth that the *Gas* endureth not the *Sulphur*, whereas theſe *noyſome Sweats* muſt have had much of *that*, if the *Chymical* writers may be believed.

Jo. Becherus phyſic. ſubterran. l. 1. ſect. 5. c. 2. ſect. 29.

As to the reaſon which my Lord *Bacon* gives *why it was not ſeated in the veins, or maſs of blood; becauſe there were no purple or livid ſpots, nor carbuncle, or the like*. In defence of that, all that —— *Thomſon* ſayes, is, "That the reaſon did well become him: (which I

'eaſily

'eaſily grant, ſince he underſtood not *Phyſick*) for in 'reality, the effects of this *Anomalous poyſon* was moſt 'eminent in the *Serum* or *Latex*, a concomitant of the 'bloud, a great depraved quantity whereof was col-'lected in the body, through the then unaccuſtomed 'ill natural *texture of the air, &c.* This is all that he ſaith to the purpoſe: wherein, for *proof*, he gives us his own *aſſertion*; which the moſt illiterate *Mountebank* or *Virtuoſo* may do: and 'tis contrary to all thoſe *preſumptions* which the *Hiſtory of the diſeaſe* doth ſuggeſt unto us. Beſides, if the *Latex* or *ſerum* be a *concomitant of the blood*, (as he ſayes) How is it *true* that the *diſeaſe* was *not ſeated in the veins*? Is not the *bloud* there mixed with the *Latex*? If it were in the *Serum*, How are the *Humours of the body free from infection*? ſince that is one of them. A *Lawyer* that ſhould thus defend his *client*, would deſerve to be caſt over the *barr*: What your *Baconical* Experimentators may adjudge ——— *Thomſon* unto, I know not: but no *intelligent* perſon can favour *him*.

The next point is, Whether the cure of the diſeaſe conſiſted in extream ſweats? My Adverſaries words are theſe; "*You cavil at our Lord, becauſe he ſayes,* 'Nature did ſtrive to ſend forth its virulency by an ex-'tream Sweat: *Whereas your beloved Authors tell you, all 'that recovered, were recovered by the continuance of a* 'moderate ſweat. *This* (*ſay you*) Experience *and* Ob-'ſervation *taught them; but 'twas but* Galenical, *and 'that may be certainly verified of you to be the* Miſtris of 'Fools; *for ἡ πεῖρα σφαλερὴ: None but a* pyrotechniſt *can 'explore as he ought healingly.* I pray Sir, what *but* Na-'ture *ſhould ſtrive to ſend forth the virulency*? *Doth not* 'Hippocrates *tell us* what *is infallible*; Naturæ (*i. e. 'vitales ſpiritus*) ſunt morborum medicatrices; *which 'you ought to imitate in deed, and not as you word it: then 'the Quarrel would quickly be at an end betwixt us. But 'the* Extream Sweat (*it ſeems*) *ſtumbles you: But why*

'*ſhould*

'*ſhould that* ? *An extream diſeaſe muſt have an extream* '*remedy*: *This* Hippocrates *doth alſo dictate.* In extre-'mis morbis extrema exquiſite remedia ſunt optima. '*Malo nodo, malus cuneus. But let us know a little ſtrictly* '*what is meant by an* Extream Sweat, *and a* moderate, *in* '*relation to this truculent plague. The* extream ſweat (*i.e.* '*very large*) *was, according to the ſtory,* mortal. *The* Mo-'derate *ſalutary. VVhich I deny,* κατὰ ποσότητα καὶ κατὰ λόγον, qua-'tenus *mere* Sweats: *for, according to my Obſervation this* '*twenty three years, all malignant peſtilential Feavers, the* '*Peſt it ſelf, and the* Griping of the guts, *which holds a* '*fair proportion with the* Sudor Anglicus, *did all receive a* '*moſt certain and expedite Cure, beſt by* extream large ſweats, *if the ſtrength were kept up; otherwiſe no* ſweat, '*more or leſs, is of any ſignificant benefit.* Quicquid fit vir-'tute naturæ, fit ἀθρόως καὶ λαβρῶς, non autem πολυμερῶς. '*VVhatſoever Evacuation is attempted by Nature robuſt,* '*directly ſupported, is performed plentifully, impetuouſly,* '*and incontinently, not dribling by piece-meals.*

In this diſcourſe I ſhall paſs by that ignorant compa-riſon betwixt the *Griping of the guts*, and the *Sweating-Sickneſs*, betwixt which there is *no affinity* that I can learn: and perhaps *Spigelius* in his book about *Semi-tertian feavers*, may give the beſt account of *that diſeaſe*: 'tis one, I confeſs, I never *ſaw*, but I dare avow, *'tis* not of the nature of the *Sweating-ſickneſs*; though it may ſo happen, that the *Griping of the Guts*, as well as other diſeaſes, may be not only *malignant*, but *peſtilential.* He is a *Baconical* Philoſopher, and therefore may write any thing. It is alſo obſervable, that I gave him no ground for that demand, *VVhether nature did not eject the virulency*? and *VVhether we ought not to imitate Nature*? No *Galeniſt* or ſober *Phyſician*, did ever deny *theſe things*: and the latter *aſſertion* is that, on which all our practiſe is *founded.* 'Tis for the *Virtuoſi*, who approve and talk of *Commanding Medicaments*, (which over-rule nature) to deny *it*: or for the followers of *Van Helmont*, who

 teaches

teaches that 'tis an *imbecillity* of a *Physician* to attend or permit any *Crisis* or *concoction* of a *disease*. We are willing to be tryed by that *Rule*; yet not to be reconciled to ——— *Thomson.* I must also take notice of the contempt which he expresseth for the *Experience of the Galenists*, in comparison of that of the *Pyrotechnists*: whereas very few of these *Philosophers by fire*, have so much judgment as to make an *exact experiment*: But those of the *others* are as *certain* and *accurate* (understand me not of all) as *humane nature*, and the *mutability of humane affairs* are capable of. I now come to the *principal controversie*, concerning the benefit of *Extream sweats* in *this disease*. I confess 'tis *hard* and *strange* in a *Peripatetick*, that I should be pressed with *arguments* against *matter of fact*; this is a *weakness of judgment*, saith *Aristotle*. But though all the writers else do dissent from my Lord *Bacon* herein, (and 'tis *bruitish* to call the credit of so *many attestations* into dispute) yet I shall shew some regard to the reasons alledged. That *the remedies of a disease must be as exquisitely extream, as is the disease it self*, may, with some *interpretations* and *restrictions* pass: for there is a *caution* to the contrary καὶ αἱ κενώσεις μὴ ἐς τὸ ἔσχατον ἀγωσι σφαλεραί. *Extream evacuations are dangerous*; and no man putteth the *Life* of his *Patient*, if the disease admit of any *delay*; which some *plagues* have done: so that there is *judgment* to be used, and *observation*, to warrant *that practise*, such as my *Adversary* is not capable of. But however, *this* doth not specificate *the remedy*, or inform us whether we ought to *bleed*, or *purge*, or *sweat*, in *extremity*. A *Squinancy* or *Apoplexy* are *extream diseases*, yet no man *in his wits*, would in *them* rely upon the most potent *sudorificks*. So that I am obliged to desire my Adversary to apply that *general proposition* to his conclusion for *violent sweats*: for I *cannot*. But he sayes, that *Extream sweats* have been observed by him to be the most expedite cure for all *malignant pestilential feavers*, the *pest* it self, and the *Griping of the guts*: and for this he alledgeth the *Experience of twenty three years*. Had our

Au-

Author been one of those *Rosicrucians*, who pretend to have lived about three hundred years, his *Experience* concerning the *Sweating-sickness*, might have imported somewhat: but since he never *saw* that *disease*, nor hath had any *tryals* to cure *it*, 'tis most impertinently argued, that because *some* other *malignant* and *pestilential diseases*, the *plague* it self, or *Griping of the guts*, are cur'd so *sometimes* (for 'tis no more) with success, therefore the *Sweating sickness* ought to be *so cured*. I dare say, an hundred *Galenists* have taught us to cure the Plague by *extream sweating*. I shall only mention *Sennertus*, *Petrus Paaw*, *Palmarius*, *Van der Heyden*, *Gardinius*, *Isbrandus à Diemerbrook*. Concerning *pestilential* and *malignant fevers*, the assertion is *false*, or must be regulated by *many considerations*, before it can be admitted: As to the cure of the *Griping of the Guts*, I do not hear such a character from *London*, of his *Cures* thereof, or the success of his *pepper-drops*, to endear *his Method* unto me. But after all this, he concludes me by a *third reason*, which, if it were *true*, I would submit thereto. *viz. Whatsoever evacuation is attempted by Nature robust, directly supported, is performed plentifully, impetuously, and incontinently, not driblingly, by piece-meals.* Therefore, *since the Sweating sickness was an effect of robust nature, ejecting the venome of the disease, the sweats must have been violent, and the Physicians ought to have procured such.* But I cannot find any solidity in the Argument. *Quicquid fit virtute Naturæ, fit* ἀθρόως ἁλαβρῶς, *non autem* πολυμερῶς, *Is no Aphorism of Hippocrates*, though you read it πολυμερῶς, nor true amongst *Physicians*. The *Sweating sickness* is an instance to the contrary: and so are those diseases which are terminated by a *flow bleeding at the nose*, which if sufficient to *put an end to the disease*, needs not to be impetuous. Neither is it necessary that all the *evacuations* of invigorated nature be *extream*: there is a practical rule in *Hippocrates*, which doth not direct us so much to the *quantity*, as quality of what is evacuated, and the *benefit*

which the Patient finds upon it, and the *ſtrength* with which he bears it. *Quæ prodeunt, non ſunt æſtimanda*
Hippocr. ſect. 1. aphor. 23. *multitudine, ſed ut prodeant qualia oportet, & ferat facile.* Thoſe *evacuations* in morbid bodies, which are either produced by *Art* or *Nature*, are not ſo much to be judged of by their *multitude*, as by their being *ſuitable to the diſeaſe*, and *beneficial* to the parties. It is true, that *ſmall*
Valleſius in Aphor. 23. ſect. 3. *evacuations*, as drops of *blood from the noſe*, and *ſpots* in *malignant* and *peſtilential feavers*, and *ſmall* and *partial ſweats*, are of a *dangerous prognoſtick*. Yet it is not ſo neceſſary that the *evacuation* be *great*, as that it be *appropriate to the diſeaſe*, and *well* undergone by the Patient. For, let never ſo *much* come away (as in *dejections*
Proſper Alpin. de præſag. vita & morte, l. 7. c. 11. *of ſincere humours*) yet if it be not ſuch as the *diſeaſe* requireth, 'tis *evil*, if not *pernicious*: And if it be not undergone with *ſtrength* and *benefit* to the patient, certainly the evacuation is prejudicial. But if thoſe *Humours* be evacuated, which are the cauſe of the diſeaſe, and the Patient *bear it well*, ſuch evacuations are not hurtful; whether they be *greater* or *leſs*: If they are *leſs*, the benefit is *leſs*, yet are they *beneficial*: and if they be *greater*, if the Patient *bear them well*, how great ſoever they be, they are not *exceſſive*. There are times when even *critical evacuations* call for our aid to *moderate* and abate them: that is, when they tranſcend the *ſtrength of the patient*; and the *vital indication* being alwayes urgent, we muſt not ſuffer the party to dye by his *Cure*, any more than by *his diſeaſe*. But neither is it true alwayes, that *Nature* operates thus *violently*; and there happen frequent *circumſtances*, in which the *Phyſician* ought not to correct her *deficiency*, but *otherwiſe* make the beſt benefit he can of it: This happens in *Symptomatical evacuations*, in diſeaſes that are of *difficult judicature*, whereof, as ſome are *noxious*, and to be ſtopped; ſo ſome are *beneficial*, yet *not to be promoted*: theſe give *hopes of recovery*, but of a *ſlow one*: and where it is apparent that the diſeaſe will be δυσλυτος, δυσκεστος, *ſlow* and *difficile*

ficile in its *own nature*, 'tis madness to promote those *excretions*, which may *weaken nature*, but not depel the *distemper*: those *small evacuations* and otherwise *unseasonable*, in *such diseases*, have their advantages, and they which *under them* escape with *difficulty* and *danger*, would unavoidably perish *without them*. This is a known case in *Physick*, which to insist farther on, were to teach ——— *Thomson* the Method of Physick, which is not my present intention; I only recommend this to these *Baconical* Experimentators, that they would Understand before they Judge; which I am sure my Adversary does not.

Er. Vallesius method. med. *l.2.c.13. Septal* de peste l. 5. c. 20.

I have now fully and perspicuously replyed to all that He hath said in defence of the Lord *Bason*, which is the principal part of his book: I might leave the rest to be replied unto by Dr. *Chr. Merret*, as a more fitting *Antagonist* for him, than I am: the match being pretty equal betwixt *them two*. Yet I shall cursorily shew the ignorance of this man, in one other important passage of his Book.

He is pleased infinitely with talking of *Van Helmont*, p. 45. as one that instructs in *real entities*; his *philosophy is most veriloquous and Authentick*. I shall take the liberty to tell him, that I esteem best of that *Philosophy* (in reference to *Physick*) which is most *useful and beneficial to the health of men*; and this I desire to see *evidenced by practise*: and I farther judge of an *happy practise*, not by the *plausible reasons* he gives, nor the *pretty curiosities* with which he sets off the *preparation*, or *efficacy of his Medicaments*; nor by the confidence with which he *boasts his own performances*; but by the *esteem* he gains in the world, and *multitude of patients*, who will resort unto him that doth the *greatest cures*: so *sweet is life*. But I have assurance from those who *knew* and observed *Van Helmont*, that he was no *great* nor *happy practitioner*: and I am confirmed in this opinion, by what *J. J. Becherus* relates concerning him, who (though he have

otherwise

otherwise *some esteem* for him, yet) reckons on him as an idle Theorist. " *Concerning* Van Helmont, *I know* " *not well what to say: It is said, that he could not cure a* " *common feaver; and that he dyed of a burning feaver,* " *because he would not make use of any Physician, whose* " *faculty he had so reviled and contemned, choosing rather to* " *dye helpless.* Doctor *Krafft* [one much celebrated by *Becherus*] *told me, that being in* Brussels, *he enquired* " *after* Van Helmont, *and demanding of some persons which* " *had lived long in the same street that he did,* where his " house was? *they could not tell him, and protested they* " *had never heard of his* name: *whereat he was surprized,* " *as deeming it impossible, that a Physician, who, like ano-* " *ther* Æsculapius, *performed so miraculous cures, and to* " *whom multitudes might be presumed to resort, having* " *lived so many years in one place, should not be so much as* " *known to his next neighbours, amidst whom he had lived. In-* " *deed* many *complain, that the Theory which he layes down* " *is not found in Practice to answer expectation, which hath* " *occasioned the death of many Physicians and their Patients:* " *as appeared in the late plague upon the* Rhein, *where a* " *dapper Priest and his brother, having by chance met with* " Helmont *upon the* Plague, *they read it over so studiously,* " *that they retained it all in their memory most exactly, and* " *thought it was impossible but that the Practice would be* " *such as would justifie the Theory. From* Holland *they* " *came to the infected places, and desired leave to act* " *the Physicians in the cure of the Plague: which having ob-* " *tained, in a few dayes they both dyed. It is manifest* " *hence, that many things may be with great plausibility dis-* " *puted by a subtile tongue, and wordish pen, but few ap-* " *pear good upon Experience.* As little is to be said in the behalf of *Phædro*, *Scheunemannus*, *Severinus Danus*, and *Paracelsus*: and *Henricus Lavaterus* (and others) shew-eth, that the performances of *Angelus Sala*, (though one of the best of the *Chymical* practisers) did not gain him credit in *Switzerland*, but that his famed *extracts* proved fatal

J. J. Becherus, physic. subter. l. 1. sect. 4. c. 1. sect. 7.

H. Lavaterus Defens. Galeanic. adv. A. Salam. p. 81.

fatal to many *persons of quality* there. There is not any thing so *lying* as a *Chymist*; and the *Medicines* they boast of, and the *Laboratories* they talk of so much, are commonly found to be *delusory braggs*. I shall not prove this out of *Agyrto-mastix*: nor insist upon it, that Mr. *Odorde* did pretend to as great *Arcana* as any of the *Fraternity*: God had been pleased to communicate unto *him* a Method in the *plague*, to preserve thousands from the *grave*, which *he* promised to administer publickly and freely to all that should desire it. *Yet did he and his wife dye thereof*, in 1665. They will write books of *Theories*, *Processes*, and *Medicaments*, yet never make or try them. Thus *Faber* of *Montpelier* writ much in *Chymistry*, but most notorious untruths. An eminent person told *Becherus*, that being excited with the *renown* of the man, and a *curiosity* in *Chymistry*, he went from *Italy* into *France* on purpose to converse with *him*; but could not find that he had so much as *one Furnace*, or was at all versed in the *practice of Chymistry*. So *Agricola*, who writ upon *Poppius*, was put to publick shame by an *Apothecary*, for writing so *many untruths*. So that it behoveth the people to consider, not so much with what *impudence* a man vaunts himself (tis an usual sign of a proportionable *ignorance* and *imposture*) but to examine rather, as I do, the *solidity of their discourses*, and *efficacy* of their *Medicaments*: 'tis not a *casual cure* that makes a man *knowing*: 'tis not a *sudden alleviation*, which lasts not *long*, and perhaps throws the Patient into a *worse disease*, or destroyes him in a *short time*, that argues the *goodness of his Medicines*. No, the *constitutive qualities* of a *Physician*, are skill in the *real causes* (or such as are as effectual *as if they were so*) and the signs of diseases: the *diagnosticks* and *prognosticks*, and a *Method of curing* (authenticated by the History of *Medicine*) and *Medicaments*, such as the Experience of *Sage practisers* recommends unto us, (to which end he must be well read in the *History* of the *Materia Medica*, and not set up with *two* or *three praxes*) these

Odorde's poor mans Physician, *p.* 89.

J. J. Becherus: ubi supra.

theſe render him accompliſh'd: He that underſtands *Humane Nature* beſt, and the operation of the *non-naturall* and *preternaturall* things upon it, is the perſon to be employed: not everry one that can proclaim a catalogue of *diſeaſes*, (which oftentimes are *of neceſſity* to be cured *ſeveral wayes*) and boaſt of *effectual*, *pleaſant*, and *univerſal medicaments*, is to be regarded. 'Tis not the moſt *acute*, *experimental Philoſopher*, that is the beſt *practitioner*: many *Theoremes* are plauſible, which *practice* refutes: this was the *death* of *Van Helmont*; thus *Des Cortes* died of a *pleuriſie*, when, through a *prejudicate novelty*, he *refuſed to be let bloud*. 'Tis not great *ingenuity* and *parts* employed in *florid*, or *different ſtudies*, that make any man a competent judge of a *diſeaſe*, or the *operation* of a *Medicament*: The Lord *Bacon* is a great inſtance of this *truth*, and the inſtance of the *Sweating-Sickneſs*, convinceth us of the *vanity* of him, and the *Comical wits*, in their pretences to *diſcourſe of*, or *reform* what they ſo *little underſtand*.

Jac. du Bois, in præf. ſcript. adv. *Wittichium*.

I had thought to have proſecuted ſome other points, by him *agitated*, and to have demonſtrated the *vanity of the courſes* he takes, and *Medicines* by him recommended: and to have vindicated the *ancient Phyſick* and *Medicaments* particularly, and given an *Hiſtorical account* of the inconveniences that have befallen this laſt *Century*, by reaſon of theſe *Pſeudo-phyſicians*: but I have not leiſure now to do it; nor is my Adverſary ſo conſiderable, that I ſhould take ſo much pains to *expoſe* him: what I have writ here, is enough to ſhew his *intolerable ignorance* and *folly*, and repreſent him as *unfit* to be entruſted with the life of any man.

A POST-

A POSTSCRIPT.

I Think I cannot better conclude this *Treatiſe*, than by repreſenting to ——— *Thomſon*, that account which he himſelf gives elſewhere of the Sweating-Sickneſs: for thereby it will appear, how out of an *ambition* to contradict me, he oppoſeth *himſelf*: yet is even *that* as little agreeable to *truth*, as 'tis to the relation of my Lord *Bacon*.

G. 7. Of the true way of preſerving the Blood, pag. 24.

"*Here I cannot but make an animadverſion upon that* 'truculent *diſeaſe which formerly raged in* England, *to* 'the *deſtruction of ſome thouſands. It had its original* un- 'doubtedly *from a degenerate* Latex *turned into a ma-* 'lignant Ichor, *which cauſed a tabefaction, or colliquation* 'of *the Blood and nutritive juyce, which iſſuing forth in* 'a *copious meaſure* ſymptomatically, *without any* Eupho- 'ria, *or alleviation, quickly conſumed the ſtock of life.* 'The *attempt made at firſt to cure this malady, by ſtop-* 'ping *the ſweat by aſtringents and* cooling *things, proved* 'not *only* fruſtraneous, *but alſo very* mortal, *for the ma-* 'lignity *being thereby more concentrated, wanting a* Mo- 'mentaneous *vent through the univerſal membrane, it* 'forthwith *preyed upon the* Archæus, *extinguiſhing the* 'lamp *of Life in ſuch ſort as a* Mephitis, *or ſubterraneous* 'damp *doth obfuſcate, and at length put out the flame of* 'a *Candle. Now the proper adequate remedies that took* 'effect *in this feral evil, were* Euſtomachies, *as likewiſe* 'counterpoyſons, *that did immediately reſiſt the venome by* 'obliterating *the* Idæa *thereof, by corroborating the* enor-

What reſemblance is there betwixt this diſeaſe, *and that of the* Griping of the Guts?

'men,

'mon, *exterminating the intoxicated* Ichor, *and ill-con-*
'*dition'd* Latex, *through the habit of the body, carrying*
'*it that way* quo natura vergere ſtudebat.

This *Baconical* Philoſopher here directly *contradicts* what he would ſeem to aſſert *againſt me* : *viz.* His *Author* and *he* ſay there, that the *maſs of bloud in the veins was not infected* (for *then* there would have enſued *ſpots* and *botches*) but only the *vital ſpirits.* Whereas *here* he ſaith, that *It had its original doubtleſs from a degenerate* Latex, *turned into a malignant* Ichor, *which cauſed a tabefaction, or colliquation of the* blood *and nutritive juyce.* And *undoubtedly* he is deceived, in fixing the *original* of *that diſeaſe* in the *Latex*, whereas it depended, and had its *beginning* and *being* from a *particular venome* and *corruption of the Air* ; for, notwithſtanding that the *unſeaſonableneſs of the preceding year*, might have *depraved* the bodies of men, yet did both *ariſe, ſpread*, and *ceaſe* ſo ſuddenly, that 'tis evident its *original* and *continuance* was derived from *another cauſe.* Whereas he ſayes it was Symptomatical , 'tis a ſign *he underſtands not what he ſayes* : for *ſymptomatical evacuations* (at beſt) are neither to be *promoted*, nor *provoked*, but only *continued* : whereas ſuch as did not *of themſelves* ſweat, were to be forced *in this caſe*, to ſweat *moderately*; otherwiſe they *dyed.* I profeſs I do not know yet the nature of that *diſeaſe*, whereunto to *reduce it* , or how to *ſpeak of it*, in the language of a *Phyſician* : they that *ſaw* it, were as much perplexed with the *notion of it*, as with the *Cure.* That any Phyſician did *then* go about to *cure it*, as my *Adverſary* reports, by ſtopping the ſweat by aſtringents and cooling things, is an *attempt* I cannot *believe*, till I ſee ſome *good Author* for to averr it : it being contrary to the *moſt received rules of Medicine:* And it is certain, that in *England* (at leaſt the *firſt time*) the *cure* is not ſaid to have been *performed* by *Euſtomachies* and *counterpoyſons*, *that did immediately obliterate:*

Sennert. *Inſtit. medic. l.* 3. *part.*3. *c.*10. Fr. Valleſ. *Controv medic. l.* 15. *c.* 3. Proſper Alpinus *de præſag. vita & morte, l.* 6. *c.*3. Ludov. Septal. *Animadverſ. l.* 3. *ſect.* 60, 61.

literate the Idæa *of the venome, corroborate the* enormon, *and exterminate the intoxicated* Ichon, *and ill-conditioned* Latex, *through the habit of the body.* For,

'the Patient was to lye ſtill during the whole twenty 'four hours, and ſo caſt the clothes on him, as in no 'wiſe to provoke the ſweat, but ſo lye temperately, that 'the ſweat might diſtill out ſoftly of its own accord, 'and to abſtain from all meat, if he might ſo long ſuffer 'hunger, and to take luke-warm drink. ——— Out of which, it is *manifeſt*, that they did not uſe *ſuch means* as ——— *Thomſon* relates: and if ſmall beer warmed may paſs for a cooler, the uſe *thereof* was more beneficial than he will allow of. But whatſoever were the *Method* at the *firſt time* of that *ſickneſs*, in the time of Dr. *Caius*, (though they were cautious of giving any thing, *if the Patient did ſweat*, till ſome hours were paſt) yet did the *Phyſicians* uſe *temperate cordials*, but moderately given: and ſuch as he would have termed ſomewhat *cooling*, but that ſo *powerful* and *prodigious effects* as were then ſeen, ought not to give credit to *Galenical Medicines:* yet had they no other in thoſe dayes, vulgarly uſed. In *Germany*, when the diſeaſed party *did not ſweat*, they gave them *treacle.* and other *Galenical* medicines to *enforce them*: when *he did ſweat*, then did they give them *manus Chriſti perlated*, *jelly of currants*, *berberies*, and the like, mixed with the *conſerves of red roſes*, *borrage*, and *marigolds*; and if the patient *could not refrain drink*, then was ſuch a *Julep* as *this* preſcribed;

Th. Cogan's Haven of health. *p.* 273.

With this relation of T. C's. *do agree both* Polidore Virgil, Hollinſhed, *and* Hall, *in their* Chronicles *of* Henry 7.

R. *Of the waters of* Sorrel, Scabious, *and* Carduus Benedictus, *of each three ounces: of the Syrup of* Sorrel, *and that of Syrup Citron-juyce, of each an ounce and an half.* m.

Wierus obſerv. l. 2, *de ſudore Angl.*

This direction is *irreconcileable* to what my Adverſary writes: yet were ſuch *Galenical* medicines effectual in that *ſtrange diſeaſe*: And to ſee with what

indiſcretion this *Pyrotechniſt* mentioned the cure of this diſtemper; one *Tyengius* was famous in *Holland* for his ſucceſs therein, whoſe *method* is thus deſcribed.

Petr. Forreſt. Obſervat. *l.* 6. obſ. 8.

'Quod ad curationem attinet, & *venæſertionem*, & '*purgationem*, ab initio ſtatim exhibebat; ſed prorum-'pente ſudore ab iis abſtinebat, ne motum naturæ im-'pediret: & magna cum laude (uti ſcripſit) utebatur 'tali potione;

'R. *Hordei mundati, florum nenupharis & violar. ana* 'm. ß. *Carduiben. pimpinellæ, borragin. bugloſſ. paſſul.* 'enucleat, ana. p. j. *ficuum numero decem, lentium excor-*'ticat. ʒvij. *laccæ ablutæ & mundæ* ʒv. *tragacanthi* ʒiij. 'Zedoariæ, *dictamni, rad. tormentillæ* ana ʒj. *f. decoctio in* 'aqua *nenupharis & bugloſs. q. s. & poſt frigidationem* 'exprimatur.

This *potion* (which theſe *Mungrel Chymiſts* would call a *deteſtable ſhop-drench*) did he give as a *temperate cordial* to his Patients, to allay their *thirſt*, and gently continue the *ſweat*: He gave it *warm*, cauſing them to *ſuck* frequently a *few drops*, or ſo, through a *reed*.

I have been more particular in *this*, to convince the *Baconical* Philoſophers, how *different Cures* the *Phyſicians* in *ſeveral Countries*, were put upon in a *diſeaſe* which ſeemed to be *uniform* and the *ſame*, ſo that 'tis not the knowledge of the *general Types of diſeaſes*, (I dare ſpeak ſo, notwithſtanding that Dr. *C. M.* called me *intole-rably ignorant* for it; but *'twas he was ſo*) nor the *col-lecting of ſundry receipts and Arcana*, that accompliſh a *practitioner*, but a more *laborious ſtudy in the grounds of Medicine, ſkill in the diagnoſticks, prognoſticks, Method of curing*, and the *Hiſtory of Epidemical diſeaſes*, and *parti-cular caſes*, together with the *Experimental accounts of our* Materia Medica, *and the Art of compounding Medicaments*

occa-

occaſionally, which muſt *perfect* him in his *profeſſion*. 'Tis to ſuch the *world* hath been obliged in its *extremities* hitherto; and 'tis the *felicity* of our Nation, that the *Colledge* at *London* is compoſed of ſuch, and ſuch our *Univerſities* do breed: and were all the *books* in *Europe* to be conſumed by *fire*, 'tis the works of ſuch men I would intercede for, and *reſcue*, whilſt all thoſe of the Lord *Bacon*, the *Baconical* Philoſophers, and *Van Helmont*, ſhould be *conſumed by the flames*.

There are other faults in this *account* of *G. T*'s. that I might inſiſt on, as, that the *intoxicated Ichor ſhould iſſue forth in a copious meaſure ſymptomatically, without any euphoria or alleviation*: Which is *abſolutely falſe*. For, though *violent ſweats* were *mortal*, the more *moderate*, though *copious*, did not only *alleviate*, but *recover* the Patient, if all *circumſtances* beſides were duely obſerved. I might reflect upon the *canting language* and *jargon* which he uſeth: He that *writes* in that *manner*, does prudently, to *dedicate his books to ſuch as are not* befitting Judges *of what they contain*.

FINIS.

AN EPISTOLARY

DISCOURSE

CONCERNING

Phlebotomy.

In Oppoſition to

——G. *Thomſon* Pſeudo-Chymiſt, a pretended Diſciple of the Lord *VERULAM.*

Wherein the *Nature of the Blood*, and the *effects* of *Blood-letting*, are enquired into: and the *practice thereof EXPERIMENTALLY* juſtified (according as it is uſed by *Judicious* Phyſicians.)

In the Peſt, and Peſtilential diſeaſes:
In the Small Pox:
In the Scurvey:
In Pleuriſies:
And in ſeveral other diſeaſes.

By *HENRY STUBBE*, Phyſician in *Warwick.*

Hippocrat. l. 1. Aph. 23.

VASORUM inanitio ſi talis fiat, qualis fieri debet, confert, & bene tolerant: ſin minus, contra. Inſpicere itaque oportet & regionem, & tempus, & ætatem, & morbos, in quibus conveniat, aut non.

Printed in the Year MDCLXXI.

DISCOURSE

SIR,

IN obedience to your *Commands*, I have read over the Treatise of ——— *Thomson*, concerning *Bloodletting*: I never underwent a more *difficult task* in my life: And had the *Virtuosi* imagined with what *reluctancy* and *constraint* I should undertake *such* a work, they would have abandoned all their *other stratagems*, and imposed on me *this pennance*, as the most *severe*. I profess, I am not so understanding in the *Greek*, *Latine*, or *English* Tongues, as to comprehend his *Language*: yet I think I am not so much in *default* therein as *He*, who, according to the *peculiar fate* of the *modern Baconists*, hath either *out-lived his Learning*, or never was endued *with any*. That *He* should pretend to *read*, or *understand* Hippocrates, is a *vanity* equal to that with which *Ecebolius* professeth himself to be versed in the writings of *Aristotle*: and when he blames the *Method* which the *Galenists* have used above this sixteen hundred years, would not one imagine that the *birth* and flourishing *renown* of *Galen* had preceded *those Centuries*: whereas you must place *him* in the *second Century*, during the Reign of *Marcus Aurelius*, *Commodus*, *Pertinax*, and *Severus*, or you will contradict the account which *Galen* gives of himself, and the relations of other *Historians*: and at such time as he arose, the world was *prepossessed* with *Methodists* and *Empiricks*. But I wish his greatest

G. T. *Vindic. of the Lord* Bacon. *p.* 35.

Lacuna *in vita* Galeni. Is. Vossius *de Philos. c.* 12. *sect.* 19. Suidas *in voce* Γάλην.

 errours

errours lay in his *ignorance* of *these things*. Alas! he understands not *any thing* of the *Rudiments* of *Physick*; and to *inform him*, one must write an entire *Body of Physick*. Were it not for a few *hard words* borrowed from *Van Helmont*, such as *Enormon*, *Archæus*, *Daumvirate*, *&c.* and his *extravagancies* about *fortifying the vital spirits*, *ejecting the venome*, or spina *in diseases*, and that by a *diaphoresis* generally, by the means of certain *Arcana*, (more famous for the *death* than *recovery* of his patients) the man would have nothing to say: And do we wonder at the *unfortunate cures* for which he is blamed? or that more than *one* at *White-chappel*, should suffer by his ill-advised Pepper-mops? 'Twere *strange*, should one that neither understands *humane nature*, nor the *types*, *times*, *motions*, and *terminations of diseases*, should ever (except *by accident*) do *any good*; not that *He* should frequently *do harm*. But *a fool may commit more faults than a wiser man than I*, *and of more leisure*, *can discover*. I shall confine my *present addresse* to the point of *Phlebotomy*; wherein he so traduceth the *Hippocratical Physicians*, as so many murtherers, and particularly declaimeth against the most *judicious* Assembly of *our Faculty*, that *Europe* ever beheld; and who, if they be culpable, are mis-led by the *practice* and precepts of that Author *Hippocrates*, whom *he* himself often *cites*, and to less purpose than I might in *this* controversie alledge him.

Let D. M. take notice here, that there private Arcana, such as the Quacks pretend unto, concealing the Medicaments: and others by that name published in Print, in Crollius, Schroder, and others.

In his Preface to the Reader, he sayes, He doubts not, the time will come, yea, is not far off, that a Phlebotomist (as he hath characterized him) will be looked upon as little better than a Broachotomist, a Cut-throat.

Some years since, I designed to write an enquiry into the *original*, and *nature* of the *Blood*, and the usefulness of *Phlebotomy* in several diseases: in which, abstracting from the *single opinions* of Writers, I purposed to illustrate each point by *practical principles*, and ample *Histories*, out of *intelligent* and *creditable* Physicians, concerning the *bad* or *good* success with which *Blood* hath been let in *diseases*, according to the several *Ages* of the *diseased*, and the *nature* of their *maladies*, whether *Epidemical*,

mical, *Sporadical*, or of a *leſs general conſtitution*. But the *Controverſies* I have been involved in, have ſo incumbred me, that I have not been able to purſue *thoſe intentions*, nor have I any *preparations* almoſt in order thereunto, as yet digeſted into *writing*. But this *Antagoniſt* requires not all *my ſtrength*; a leſs *powerful Aſſault* will ſuffice to overthrow *Him*.

'Tis not any kindneſs to *him*, but *indulgence* to my *ſelf*, that I do not purſue all his *errours*, even in the generation of BLOOD; or go about to convince him of the ſeveral *miſtakes* which he is fallen into, for want of reading more modern *Writers*, and their *diſcoveries*. Beyond *Helmont*, or in *contradiction* to *him*, the man neither *does*, nor *will* underſtand any thing: And even in that *Author* he ſeems ſo little converſant, that he ſometimes miſtakes *him*, and generally repreſents things with more *obſcurity* and *intricacy*, then they are expreſſed in the *originals* of *Van Helmont* or *Grembs*.

Of thoſe that have oppoſed *Phlebotomy*, theſe are not the *firſt*, which *this Century* hath produced: long ago *Galen* complained of *Eraſiſtratus*, (the ſiſters ſon of *Ariſtotle*) that he was ἀιμοφόβος, *fearful to let his Patients blood*; before him, *Chryſippus Cnidius*, *Medius* and *Ariſtogenes*, did reject the uſage: Alſo *Apæmantes*, together with *Strato*, are recorded to have contradicted the practice of *Phlebotomy*, by *Arguments*: The ſtrength of that *faction* in *Phyſick*, was ſuch at *Rome*, in thoſe times, that *Galen* ſpent ſeveral *books* againſt the followers of *Eraſiſtratus* upon *this ſubject*. But above *all* that ever intermedled, I will give this character to ------ *Thomſon*, that *never did any preſume more upon ſo weak grounds*: Nor ever was Confidence *ſo poorly mounted, and ſo pittifully be-jaded*.

Galen. de *Sangu. miſſ.* c. 2.

After much trouble and enquiry, the ſum of all, *he* ſayes, in this caſe, amounts to *this*.

The *promiſcuous* maſs of *Bloud* which flows in the *Veins* and *Arteries*, he divides into *three parts*: the one

is called by him the *Latex*; the ſecond *Cruor*; the third *Sanguis*, or moſt properly *Blood*.

G. Th. of the *Blood*, p. 19, 20.

The *Latex*, ſo called by *Helmont*, by ſome *Lympha*, by the *Greeks* ῥεῦμα, is a *diaphanous clear liquor*, ἀποῶ, fabricated in the ſecond digeſtion, by virtue of a ferment there reſiding. It is the inſeperable companion of the *Bloud*, and cloſely perambulates with it through all the wandring *Mæandrous pipes* in this *Microcoſme*. It is the matter of *Urine*, and *Sweat*, *Spittle*, *&c.* and renders ſeveral other conſiderable ſervices to the body.

Ibid. p. 22.

The *goodneſs* or *pravity* of the *Latex*, depends much upon the *bloud*, as it is conſtituted; for, albeit it is no *eſſential part* thereof, yet is it altered for better or worſe, according to the *channels* it paſſeth through, the *lodging* it taketh up, and the condition of its *aſſociate*: notwithſtanding that it may be ſometimes impaired in its due *excellency*, and the *bloud* withall remain very pure and ſincere.

Ibid. p. 1, 2; and 34.

The *ſecond* part is called *Cruor*, from κρύω, *i. e. Crudus concretus*: It is the more *crude impure* part of the *bloud*; the *purer* part of the *chyle* being digeſted into a *ſaline* juyce, is carried into the *milky veſſels*, and *veins*, and mingling at laſt with that *ruddy liquor*, is called *Cruor*, and at laſt becomes perfect *bloud*. It undergoes manifold guiſes, and is often the ſubject matter of a multitude of diſeaſes, being ſometimes changed into an *Ichor*, *Tabum*, or *Sanies*.

Ibid. p. 2.

The third part is *properly* called *Sanguis*, or *Bloud*, κατ' ἐξοχὴν, it is a moſt pure ſweet *Homogeneous*, *Balſamie*, *Vital juyce* (for the moſt part of a bright *Red*, or *Reddiſh* colour) made by the *Archæus*, by virtue of ferments implanted in the ventricles of the *heart*, *lungs*, *veins* and *arteries*, cauſing a formal transmutation of the *Ekyme*, or milky ſubſtance into this *ſanguineous* liquor, ordained to be the ſeat of *Life*, and and the principal matter for *ſenſe*, *motion*, *nutrition*, *accretion*, and *generation*.

It

It is for good reaſon called *Balſamum, ſeu Condimentum totius corporis*, foraſmuch as it hath a *ſanative* power, ſweetly uniting all the parts of the body, for the conſpiration of the good of the whole.

Some peoples fleſh will not heal upon the leaſt cut, *notwithſtanding this* Sanative quality *in the* Blood.

It is a great *preſervative* againſt putrefaction, as long as it remains in its integrity, for conſiſting of many *ſaline* particles, it ſeaſoneth whatſoever it toucheth with a pleaſing *ſapour*.

Yet are ſeveral glandules *ſweeter to taſte, than the* ſanguineous, fleſhly *parts of* Animals.

It is the proper *habitation* of the *vital* ſpirit, the immediate inſtrument of the *ſoul*, in which it ſhines, diſplaying its radiant beams every way, that *ſenſation, motion, nutrition*, and all other functions may be exquiſitely performed.

What becomes of the duumvirate *then? And may* I *not ask, if the* Spirits be not *the immediate Inſtruments of the* Soul?

God and *Nature* never intended other, then that the *bloud* ſhould be *Homogeneous*, pure, plain, ſymbolical with that ſingle principle of the *Univerſe*. Now theſe Peripatetick Philoſophers deliver to the world, that the contexture of this *vital juyce* is made up of *Choler, Phlegm, Melancholy*, and *Blood*, which united, produce this compounded body, which we call *Sanguis*: How groſly erroneous and dangerous this *Tenet* is, moſt Learned *Helmont* hath made evident.

Ibid. p. 5.

If God *and* Nature *intended the* blood *for ſo* pure *and* homogeneous *a liquor; why did they produce man with ſuch a fabrick, that the* chyle (*ſeveral ways tinged*) *ſhould mix with it in the* ſub-clavian *veins?*

Wherefore we conclude with that noble Philoſopher, that *Bloud* is an *Univocal ſubſtance*, diviſible only by ſome *external* accidental means, as the *Air*, or *Fire*, which cauſe a various texture, and different poſition of its *Atomes*, whereby it ſeems to conſiſt of parts which are not *really* inherent in it, as is maniſeſt in its degeneration from its

Ibid. p. 6.

its native *colour*, *ſapour*, *conſiſtence*, and *goodneſs*, which it had before it became corrupt in the pottinger, or underwent the torture of fire. *Both* of which do ſtrangely larvate and diſguiſe the *puniceous Balſome*, giving occaſion to the *Galeniſts* to frame their *four fictitious humours*, no where really exiſtent.

This being the foundation of all *his* declamations againſt *Phlebotomy*, before I proceed any farther, it may ſeem requiſite that I ſhould make ſome Animadverſions thereon;

I might take *much* notice of, and diſplay his errours, as to what he ſayes, that the *Latex* is by the *Greeks* called ῥεῖθρον: this is the *firſt* time I ever *read* it called ſo: the uſual terms being ὀρρὸς, ἰχὼρ, and ὑγρασία. The *notion* (whatever *Helmont* ſay) is not new *at all*: an hundred *Galeniſts* have *mentioned* and *treated* of it, as the *vehicle of the bloud and nouriſhment*. But that *cruor* ſhould come from χρύος, *crudus concretus*, is an opinion ſingular to the *Baconical Philoſopher*. That χρύος doth ſignifie *cold*, I know well: and that *cruor* properly ſignifies the the *bloud* of *dead people*, or the *mortified bloud* iſſuing from *putrefied wounds*, I no leſs underſtand; though *Authors* frequently confound it with *Sanguis*; But that his *Latex*, and the *Lympha*, ſo called by *moderns*, are the *ſame*, is *news*: for, it is not held that the *Lympha*, in its *peculiar form*, was pre-exiſtent in the *Arteries*, and, *as ſuch*, did accompany the *Blood* through the *Meandrous pipes*, but is *generated* as it is diſcharged into the *Lymphæducts*, and from them is re-mixed with the *bloud*: And, if it were, yet would not the definition of this *Latex* agree with *it*: for the *Lympha* is no inſeparable companion of the bloud; as appears by its *peculiar veſſels*: it is ſeldome a *diaphanous clear liquor*, being commonly tinged with [a] *ſeveral colours*, oftentimes *whitiſh*, ſometimes *yellow*, or,

C. Hofmann. de Ichor, *ſect.* 12, 13. 9. *Th. Scheuck.* de ſero ſangu. c. 1.

Gliſſon. de hepate, c. 45. *Charleton.* Oecon. Anim. *exercit.* 9. *ſect.* 7.

[a] Gliſſon. *Anat. hepat.* c. 45. *Quippe tota hæc Lympha, anti experientia, compertum eſt, denſior, minuſque pellucens, & interdum lactis inſtar albeſcens, aliquando ſuffl ava, & nonnunquam loturæ carnis ſimilis.* Vide *Charlton*, ubi ſupra.

as it were *ſtained with bloud.* And whereas this *Latex* is devoid of all *ſenſible qualities*, thoſe who have experimented the *Lympha*, do not find *any ſuch thing*, but a variety of *taſts*: Nor is it true that the *Serum* which accompanies the *Bloud* is ſuch a *Latex* as our *Helmontian deſcribes*; it being never (to my taſte) free from a *ſalſuginous ſapour*, (though it retain *that* with a great *Latitude*) nor devoid of *colour*, ſo as to be *clear* and *diaphanous*: and 'tis very *ſeldome* ſeen, that the ſaid *Serum* will not [b] *coagulate*, unleſs *preternaturally*) upon a *gentle fire*: ſo that it is no more to be termed a *Latex*, than the *whites* of *eggs* beaten to the like *fluidity*: In like manner that in the *Lymphæducts* will [c] *coagulate*, as *Bartholin* obſerves, and *others*.

b *Centies facto experimento, vadi ſemper ſerum ipſum non modo leviter incraſſari, ſed agglutinari ſieriqne membranum.* H. Barbat. *diſſ. de ſangu. & ſero.* pag. 16. c *Th. Bartholin.* Spicileg. p. 71. M. Begdan. apolog. adv. *O. Rudbek.* ſect. 116.

As for the *Cruor*, that there are *graduations* of the *Bloud*, as to its *crudity* and *impurity*, is no doubt amongſt the *Galeniſts*: and that it may oftentimes tranſcend the ſtate of *due maturation*, and ſo become *degenerate*, is as eaſily granted, as that it ſhould come *ſhort of its deſired perfection*; and when this *Blood degenerates* any way into a *Tabum*, or *ſanious matter*, I muſt tell him, that *Ariſtotle* and his *followers* acquainted us therewith, before that *Helmont* was ever heard of, whoſe *Cruor* bred in the *Liver*, and diſtinct from the *Bloud*, impregnated with *vitality*, is ſuch a piece of *non-ſenſe*, as ought not to be mentioned in this *Age*, but to *Baconical Philoſophers*, who, not only *connive* at, but applaud any *Hypotheſis*.

Vide Hofman. *de Ichoribus*, ſect. 71, &c.

Concerning the *Blood*, when I read the *Elogies* he beſtowes upon it, as the *Seat of the Soul, by which ſenſation, motion, nutrition, generation, are performed*; I thought upon the opinion of *Ariſtotle*, and his zealous *ſectators* amongſt the *Phyſicians*, who have denied all *Animal ſpirits*, fixed the *principality* of the *Members* in the *Heart*,

and

and from thence derived even the *nerves*. If *G. T.* will defend the *generality* of his *Assertion*, I assure him that *Hofman*, *Van der Linden*, and *Harvey*, will be more serviceable to him than *Van Helmont*: But this *consideration* hath little influence upon the present Controversie: that which follows hath nothing of *Truth* in it: that *the Bloud is an Homogeneous*, *pure body*: for nothing homogeneous can ferment: But it is most evident, that the *bloud* is in a *perpetual fermentation*, and that it is such a *liquor*, as is constantly *generating*, constantly *depurating*, and constantly *expending it self*: so that nought but *Imagination* can represent unto us such a thing as *pure bloud*: and I hope the *specious pretences* of a *Real Philosophy*, will not terminate in *Speculation* and *Phansie*. When the *bloud* either *naturally* issues forth, or upon incision of a *vein*, it representeth unto us different *Phœnomena* oftentimes in several porringers, and in the same porringer *different substances*; sometimes a supernatant *gelatine*, and *mucus*, a *coagulated mass*, consisting of thinner, and a *less fibrous crimson*, and a *grosser*, *and more blackish-red body*, *enterwoven with fibres* (both which may be washed away from the *fibrous part*) and a *serous*, *fluid liquor*, sometimes *limpid*, sometimes of a *bilious*, or *other colour*, in which the *concreted mass of bloud doth float*: All these, with other *Phœnomena*, (in a great variety) are to be seen in the aforesaid cases: and even the *Bloud* of the *same body*, as it issues from *several veins*, furnisheth us with matter for *different observations*. Now in a *liquor* so *pure* and *Homogeneous*, as our Disciple of the Lord *Bacon* imagineth the *Bloud* to be, though we should suppose the *Air* to corrupt *it*, as it *issues into*, and *settles* in the *pottinger*, yet would the *corruption* thereof be *uniform*: which, seeing *it is not*, I take it for *demonstrated*, that it is *Heterogeneous*: And that being *granted*, it matters not whether the *four humours* (so frequently mentioned by *Physicians*) be *actually* or *potentially* in the *bloud*: Whether they be the *constitutive* parts thereof, or whether it be

Dr. Willis *de ferment.* c. 6. Kerger. *de fermentat.* sect. 1. c. 11.

E venis capitis nunquam talem muccaginem affluentem vidimus, crebrius è venis brachii, è pedum autem venis creberrimè, & in majori copia. Moebius *fundam. medic. de usu Cordis.* p. 259

be one *entire Liquor*, made up of *Heterogeneous* parts, which, in the bodies of ſundry *individuals*, produceth ſuch *Phænomena*, as if it did conſiſt of ſuch *Alimentary Humours*, and degenerates *occaſionally* into thoſe *others* that are *Excrementitious*: In order to our *practice*, 'tis all one for it *to be ſo*, and to *appear ſo*: and our *documents* are nevertheleſs *uſeful*, though they ſeem not *rigorouſly true*. The *Galenical Phyſicians* are not *herein* agreed; nor is any man confined in his *ſentiments*, about *this ſubject*: 'Tis *malapertneſs* in this *Bacon-faced* generation, to diſpute theſe *points*, ſince the *phænomena* of diſeaſes, and the *operation of Medicaments* doth correſpond with this *Hypotheſis*, and are as *adequate* thereunto, as *humane nature* (which is not capable of an *exact knowledge*, and ought to acquieſce in what is *uſeful*) can adjuſt *them*. Nor is it any more of diſparagement to *Phyſick*, that ſhould be built upon ſo *tottering a foundation*, then that the Temple of *Diana*, one of the *wonders* of the *world*, ſhould be *ſituated* upon a *bogg*.

Hitherto I have examined his *preliminary* diſcourſe of the *Bloud*, and its concomitant *Latex*, and have made it evident, that this perſon underſtands not *what he aſſerts*, nor *what he rejects*: and indeed ſuch is his *ignorance*, that after ſo much *ſtudy*, " having *rolled every* ' *ſtone, and ſearched out every ſcruple, to be informed con-* ' *cerning the truth of the* Galenick, *and* Helmontian *way*, p. 87. he underſtands neither *Nature* nor the *Galeniſts*, nor *Van Helmont*. I now come to examine his *Arguments* againſt *Phlebotomy*, which, if they be ſo *weak* and *inconſiderable*, as not to juſtifie ſo *extraordinary* an *impudence*, let him blame *himſelf* not *me*, who do not intend (if poſſible, in ſuch a *confuſed, obſcure* Treatiſe) to *injure him in the recital*.

His firſt Argument againſt Phlebotomy.

" Had *they* but conſidered how this *vital moyſture* p. 6, 7. ' [the *Blood*] ebbs and flows in *goodneſs* and *pravity*,

'upon ſlight accidental occaſions of any exorbitant paſ-
'ſions, as *fear*, *ſorrow*, *anger*, *&c.* the manifold impreſ-
'ſions of the *ambient Air*, *ill Diet*, immoderate exerciſe,
'divers exceſſive evacuations, and long retention of any
'excrement: did they rightly underſtand how *blood*,
'like *Mercury*, may be *polymorphiſed*, and changed into
'different ſhapes, and at length be *retroduced* to the ſame
'ſtate and condition, as when it was in its *primitive eſ-*
'*ſence*: certainly theſe *Dogmatiſts* would never be
'ſo forward to pierce *poor man's skin*, raſhly let out and
'throw away that *ſubſtantial ſupport of life*, fooliſhly and
'falſely apprehending that to be *totally corrupt*, and de-
'prived of what it was in its former being, and in no
'wiſe capable to be retrograde, and return to it ſelf
'again; becauſe it ſeems to *their eyes* when it appears
'abroad *diſcoloured*, inveſted with a contemptible appa-
'rel, as *yellow*, *green*, *white*, *blue*, *&c.* — —— " ſuppo- p. 18.
'ſing it to be corrupt, and ſo unfitting to be retained
'within the verge of life. It is no ſuch matter, I can
'maintain: for this *ſuperficial alteration* proceeds from
'the *Air*, ſpoiling it of its priſtine *goodneſs*, not that it was
'really corrupted in the *vein*. For the demonſtration of
'this, I will undertake, upon forfeiture of a great penal-
'ty, to open the vein of a *Cacochymic* body, emitting
'about two or three ounces of the *viſible* aforeſaid *dege-*
'*nerate matter*, then ſtopping the Orifice, make uſe of
'*proper remedies* to this Individual, whoſe habit I doubt
'not ſo to alter in the ſpace of about a fortnight, that
'no ſuch *putrid matter* as they *improperly* call it, ſhall
'be found in any vein whatſoever opened; which may
'fully ſatisfie any *ſober enquirer after truth*, that the cor-
'ruption was *never* really exiſtent in that, whilſt it was
'in the *vein*, which, in ſo ſhort a time is thus redintegra-
'ted: for *Corruption* being an *abſolute privation* of that
'*formal eſſence* of the thing: and ſith there is *no retrogra-*
'*dation in this kind*, that an *Ens* loſing its *form* by diſſo-
'lution, ſhould aſſume it again, *Nam à privatione ad*
habitum

'*habitum non datur regreſſus*: it *infallibly* follows, that 'this *juyce* thus *reſtored*, *Technicãs*, by *Art*, was never 'truly *corrupted*, as they would have it. Hence it fol-'lows, that the fair pretence of the *Galeniſts*, that the '*juyce drawn out of the Patient*, *foraſmuch as it is corrupt* '*in the porringer*, *is happily diſcharged*: appears a mere '*impoſture*, contrived on purpoſe to ſtop the mouth of 'thoſe who ſcruple and queſtion *Phlebotomy*.

This is the *principal Argument* which he hath againſt *Phlebotomy*; yet doth he ſo handle it, as that the *onely evidence* it carries with it, is, that the *Author* is a moſt *illiterate perſon*.

It is very *ignorantly* done of him, to make as if the *Galeniſts* in general did *let* their Patients *bloud*, merely for a *Cacochymy*, or *depravation of the bloud*, as if it were a *Rule* amongſt them, that Whenſoever the blood is depraved, vitiated, and corrupted, it ought to be emitted by Phlebotomy. Whereas there is not any tenet amongſt them more general, then that Cacochymical bodies require purging; the Plethoʒick, or ſuch as are in danger to be ſurcharged with exceſs of blood, require Phlebotomy; nor do *they* recede from this *reſolution*, but in *urgent caſes*, and with *deliberation*: and many are ſo *cautious* herein, that if the *bloud* appear in the *porringer* to be of an *evil colour*, and *very corrupt*, they enjoyn us to ſtop the vein *preſently*, and not *continue* or repeat the *evacuation*. I ſhall ſet down the words of *Horatius Augenius*.

Valleſius method. medend. *l.* 2. *c.* 4.

Hic vulgarium Medicorum error detegendus eſt. Putant quo ſanguis impurior fuerit, & à ſua natura magis alienus, eo plus detrahendum, & in hoc mirifice ſibi placent, in vulguſque proponant admodum utilem factam fuiſſe vacuationem, quod corruptiſſimum peſſimumque ſanguinem vacuaverint. Tu vero cui in animo eſt humano ge-

Horat. Augen. de miſſ. ſangu. *l.* 9. *c.* 24.

neri prodesse, & Medicinam inculpate exercere, contra facies ; quanto enim magis sanguinem videbis à propria natura discedere, tanto minorem quantitatem vacuabis, & aliquando (nisi copia urgeat cacochymiæ permista) à venæsectione prorsus abstineto. Nor is this the judgment of a *single writer* ; hundreds are of the *same opinion* : the Learned *L. Septalius* Animadv. Medic. *l.* 4. *sect.* 2. is of the same judgment. *In sanguine detrahendo cavendum maxime, ne, quanto putriorem, & deterioris conditionis sanguinem è vena profluere viderimus, tanto majorem quantitatem effluere sinamus : quod plurimos facere observamus : tali enim existente sanguine, & pauciores subesse spiritus constat, & vires facillime solent collabascere.* Even *Galen* and *Avicen* are alledged *for it* : And it ought with *less reason* to be objected in *England*, because our *Physicians* generally (as likewise are the *Germans*) seem not so *prodigal of the bloud of their Patients*, as to make a *Cacochymie*, *much less*, *a* διαφθορᾷ, or *total corruption of the sanguineous mass* to be the *proper indication* for *bleeding* : nay, most that hold *Blood-letting* in great diseases arising from *Cacochymie*, to be a *necessary remedy*, (not indicated by the *depravation of the bloud*, but *violence of the disease* ;) they are cautious in the *quantity* which they take away, because in *such an habit of body* the *strength* of the patient is *seldom* great enough to bear *much*. Out of which it is manifest, that what he sayes about the *impurity of the bloud in the porringer*, that 'tis an *excuse* or *imposture* used by the *Galenists* in defence of *Phlebotomy* : it is a fiction of *his own*, not made use of *directly* by any but the followers of *Botallus* : the rest will give *him* other reasons for *their practice*, than a *Cacochymie* alone, or *total corruption* of the *mass of bloud*.

Petrus Castel. de abusu Phlebot. *pag.* 73.

Alex. Massaria Apolog. l. 11. disp. 11. *c.* 14.

A farther mistake it is in *him*, that he represents the *Galenists* as such *pittiful fellows*, that should not know but that *each corruption of the bloud* is *incorrigible*, and there-

therefore *let it out.* It is true, that we do hold, that it is *poſſible* for the *bloud* to be ſo vitiated, as to be *incorrigible*, and that one may aſſoon hope to ſee the *regreſs from a total privation*, as *it reſtored.* This hath been obſerved in *peſtilential diſeaſes* ſometimes, and in *ſphacelated parts*: and perhaps I may be allowed to reckon as ſuch, the *bloud* of that perſon in *Fernelius*, which was univerſally *coagulated in the veins*; ſo as to be taken out as 'twere *branches of coral*: And that *Woman's* in the obſervations of *Pachequus*, whoſe *bloud in a continual fever did iſſue out*, upon *Phlebotomy*, as *cold as Ice*, *or* Snow: the like to which, in the *ſpotted fever* is taken notice of, as a fatal *prognoſtick* by *Petrus à Caſtro.* If *Tlempius* give me leave, I would reckon in *putrid fevers*, that *bloud* to be *incorrigibly depraved*, which doth not *coagulate*, and is deſtitute of its *fibres*, ſince *Fernelius* and others eſteem of *ſuch* as an evident teſtimony of the *higheſt putrefaction.* It is alſo true, that we do hold, that where diſeaſes are *ordinarily*, or *frequently curable*, yet by accident from the *idio-ſyncraſie* of the *patient*, or ſome other *intervening cauſe*, the *bloud* may be continued in ſuch a *vitiated eſtate*, as to be *incorrigibly corrupted*, and yet its *eſſential form* not loſt; as in caſe of *Cancers*, *Hypochondriacal* and *Scorbutical diſtempers*, *Scirrhoſities* of the *Liver*, *Spleen*, and *Meſentery*, *Leproſies*, *knotted Gout*, *calculous indiſpoſitions*, *&c.* I might mention other caſes, but *they relate* not to the *preſent controverſie*, and I have already ſaid enough to ſhew the *ignorance* of this *Baconiſt.* To come nearer to the main matter; It is true, that we do hold, that in many diſtempers, as in the *Scurvey*, *putrid Fever*, and ſome others, the *maſs of bloud* is ſo *putrified* and *corrupted*, that even that which is termed more ſtrictly Blood, is *depraved* ſundry wayes: for, if the veſſels that *generate* and *convey the Chyle*, and the *Chyle* it ſelf be *corrupted*, 'tis impoſſible but that which is *produced* and *ſupplied* daily out of the *Chyle*, ſhould participate of *it pravity*, and ſo much the more in that they flow *intimately commixed* in the ſame *Arteries* and *Veins*: But that

Fernel. Phyſiolog. l. 6. c. 7.

River. obſ. communicatæ *à Pachequo*, obſ. 46.

Petr. à Caſtro, de febre malign. pag. 90.

Fernel. Therapent. Univ. *l.* 2. *c.* 17.

Sennert. de febr. *l.* 2. *c.* 1.

that in *such cases* we hold the Blood to be so depraved, as to have loſt its *formal eſſence* totally and *irrecoverably*, is moſt notoriouſly falſe: and any man may ſee hence, that this *Ignoramus* underſtands not the *Galenical* way, but *deſerted it*, before he had acquainted himſelf *therewith*. We do hold that the *blood* and *aſſociated* humours may come to a *partial putrefaction*, and yet be recovered *again*: and 'tis this recovery and *redintegration* that we deſign by *our practice*, and if we cannot effect it *totally*, yet that *we* aim at, is, to *concoct* the *ſeveral humours*, ſo that what there is of *them* that is *alimentary*, and *agreeable to nature*, may be mitified and retained, and the reſt ſo digeſted, as that it may be with *eaſe* and *ſafety* ejected the body, and ſo the *Maſs of bloud* regain its former *luſtre* and *amicableneſs*: This being the *grand intention* of the *received* Method of *Phyſick*, 'tis one thing to debate *whether* blood-letting, *practiced according to Art*, (for *we* are not otherwiſe concerned in the Quarrel) *be a ſuitable proper means to atchieve our purpoſes*? And another, to ſay, that we pierce poor mans skin, and raſhly throw away the ſupport of life, out of a vain apprehenſion, that it is totally corrupt, and depraved of its former being, and no wiſe capable of being retrograde. This cannot be ſaid without an apparent *injury* unto *us*: We know the *variety* and *fallaciouſneſs of colours*, and by our *rules*, can well *conjecture* how far the *Humours* are *vitiated*, what may be *concocted* in order to the *nutriment and benefit of nature*, and what *maturated* to a convenient *ejectment*; And we do utterly deny the conſequence of this Argument, though *we* grant the *Aſſumption*: *Viz.*

If the bloud be of ſuch a nature that it may be recovered to its priſtine colour and vigour, without Phlebotomy, then ought not men to uſe Phlebotomy.

But the Bloud, like Mercury, may be polymorphiſed and changed into divers ſhapes, and at length be reduced to the ſame ſtate and condition, as when it was in its primitive eſſence. Ergo.

This he might have learned from Galen, *in his Comment upon* Aphor. 17. *l.* 2.

The

The *Assumption* I can grant, but not where such a *practitioner* as *G. T.* is made use of. I doubt not but the *followers of Erasistratus* could effect it by their *Fastings, Frictions, Bathes,* and other remedies used by such *judicious men:* I grant, that *robust nature* doth daily produce such *rectifications of the bloud,* in many that make no use of a *Physician*: But as willing as I am to *gratifie* my *Adversary*, I should not yield thus much to *Helmont*, or such as practice with *Arcana*, and *commanding Medicaments.*

To the *sequele* of the *Major*, I reply, that albeit that *Nature may oftentimes do miracles, yet are not miracles to be presumed upon: It is possible for the sick to recover without any means, yet are means to be used; the omission thereof is imprudent, and criminal, but the use thereof* (if the Physician be *knowing* and discreet) *safe, and as secure as the condition of our mortality permits any thing to be: A few dayes or hours of the encreasing distemper will more impair the strength of the sick, than the loss of a* little blood, *which,* in the condition it is, *adds not to the vigour or nutriment of the diseased; the dammage will be easily repaired, and perhaps all* this *nicety will be to no purpose, for, after a multitude of vexatious* (*sometimes dangerous*) *symptomes, Nature may produce in the almost exhausted patient, a violent eruption of bloud, and thereby terminate that malady which might have been alleviated, or allayed before.* Fluxus sanguinis largi ex naribus solvunt multa, ut Heragoræ. Non agnoscebant medici. *The Bloud for which they are so sollicitous, Nature her self is not so careful to preserve it, but that frequently in the beginning and progress of diseases, she alleviates her self by discharging it out of the nose, and that in greater quantities of more florid blood than the Lancet would take away: This evacuation is of all the most facile, the most easie to be regulated by the Physician* (since he can stop it when he will) *and the most innocent in the beginning and increment of diseases.*

Hippocr. Epid. sect. 1. l. 2.

"San-

Fienus de ſignis medicis, *par.* 2. *c.* 1. *ſect.* 8. & *Franciſc. Rubeus* Nocturn. exercit. in Hiſtor. Medic. *exerc.* 5. *p.* 98, 99, 100.

"Sanguinis eruptiones & hæmorrhagiæ hanc habent
'prærogativam præ aliis evacuationibus, quod ipſæ eti-
'am in principio & in aliis temporibus, etiamſi non
'adſint ſigna bonæ coctionis, poſſunt eſſe magis utiles,
'quam aliæ evacuationes, quæ fere ſemper ſunt malæ, ex
'eo quod ſanguis ſemper per apertas partes fluunt, &
'ſemper libere & commodum exire poſſit, nec eget præ-
'paratione & concoctione, ſicut alii humores, qui per
'alias evacuationes excerni debent. ——— In evacuati-
'one, quæ per venas apertas fit, nullam merito expecta-
'mus concoctionem; & hinc Medici ſecta vena in mor-
'bis acutis in principio mittunt ſanguinem; hinc & ſpon-
'tinæ ſanguinis vacuationes bonæ erunt: Addatis, ſan-
'guinis eruptiones copioſas, nedum utiles fieri, propte-
'rea quod ſanguis malus una excernatur, ſed etiam quo-
'niam ejuſdem ſanguinis evacuatio univerſum corpus re-
'frigerat, caloremque tranſpirabilem, & corpus diffla-
'bile facit. Quare hac ratione excretiones ſanguinis op-
'timæ erunt, quæ in ſtatu apparent, plene cocto exiſten-
'te morbo, ſed neque ea, quæ cum cruditatis ſignis fiunt,
'erunt plane abhorrendæ & timidæ. ——— *In fine, that prudence which obligeth us to ſelf-preſervation, obligeth us to the moſt probable courſes in order thereunto: and what can ſeem more rational, than* that *which* NATURE *directs us unto,* that *whereby* ſhe *ſo happily mitigates and concludes diſeaſes,* that *which ſo many Ages have recommended unto us, and in the uſe whereof, not only* Greece *and* Rome, *but all Nations univerſally, as well* barbarous *as* Civil *are agreed on?*

Proſper Alpin. de præſag. vita & morte, *l.* 7. *c.* 2.

And thus much ſhall ſuffice for an anſwer to his *firſt Argument*: I now proceed to the *ſecond.*

p. 52.

"The *Blood* is the ſupport of *Life*; and we are taught
"by Divine Writ, that in the *Bloud*, that *Spiritus rubens*
"is *Life.*

I anſwer, That the *Scripture*, in the places aimed at, cannot be underſtood *literally*, and *properly*: for then the words

words infer, that the *Beasts have no other soul than the bloud*, Deut. 22. 23. *onely be sure that thou eat not the bloud; for the bloud is the soul, and thou mayest not eat the soul with the flesh.* Thus it runs in the *Original*, though our *Translation* renders it *Life*. And so *Levit.* 17, 10, 14. in which last place 'tis said, that *the bloud is the soul of all flesh.* Nay, in *Genesis c. 9. v.* 5. Concerning man, 'tis said, *The bloud of your souls will I require.* It remains then, that deserting the *literal sense*, we fly to some that is *Analogical*: And hence it is that most *Divines* take the word נפש for *Life*. Thus *Exod.* 21. 23. *Thou shalt give life for life*, is not incongruously rendred instead of *Thou shalt give soul for soul.* Thus the *Civil Lawyers* frequently stile *Loss of Life* by the phrase of *Animæ amissio.* But however these passages may be *popularly* current, yet in *Philosophy* and *Physick*, when we would speak *distinctly*, and argue *firmly*, 'tis not to be allowed of for *Truth*, that the Blood, or Spiritus rubens, (as our *Helmontian* most non-sensically terms: for, as great a *Pyrotechnist* as he would seem, 'tis past *his Art* to demonstrate, that *it* is a *Spirit*, or *Chimically* to educe a *Spiritus rubens* out of it) is Life: for *Life* is nothing else but *the union of the soul with, and its presence in the body*: or, to declare it by its *effects*, 'tis the *conservation of all those faculties and actions which are proper to the animated creature*; as *Death* is the *extinction of them.* Out of which 'tis evident, that *Blood* is no more properly called *Life*, than 'tis possible for the *Definition* of *Life* to be acmodated to Blood: that is *not at all.* But since *common discourse* doth allow us often to fix the *principal denomination* upon the *chief instruments*; and that the *Scripture* explains it self, *Levit.* 17. 11. and what my *Adversary* in one place calls the *LIFE*, in another, he terms it, the principal support of Life: let us consider how far that is *true*: That the *Bloud* is not so much as a *part of the body*, (but the *Aliment thereof*) is the assertion of most *Authors*; it is not *continuous to the rest of the body*, but *floateth as Liquor in a ves-*

Scaliger de subtil. exercit. 102. sect. 5. *Fernel.* Physiolog. l. 5. c. 16.

Vallesius sacr. philos. c. 5. p. 102. *Fernel.* Physiolog. l. 2. c. 1.

veſſel: and in *vulgar ſpeech*, no man takes the *loſs of bloud* for a *mutilation*, or *diſmembring*: and there are ſundry *diſtempers* and *phænomena*, which conclude in favour of the *ſpirits*, (or what is *Analagous* to them) and the *Nerves*, to aſſert their *pre-eminence* above the *Blood*, and its *Veſſels*: and whatever may be ſaid concerning *Generation*, (which is very diſputable) 'tis a certain miſtake in our *Helmontian*, to make the *Bloud* the *principal matter for* ſenſation (whereas *ſanguine perſons* are not the greateſt *wits*, and the *ſenſes* are moſt *quick* in *women* during their *lyings in*, after a great *effuſion of bloud*, as alſo in *dying perſons*) or motion, which is not in *paralytick members*, though the *Bloud* flow unto them continually, *as it was wont before*. I add, that there is not any *convincing Argument* to prove that the *Bloud* is *animated*: I confeſs the *conjunction of the ſoul and Body*, and *operations* conſequent thereunto, are moſt *myſterious* unto me: and I think it no leſs true that *our Life is a conſtant miracle*, then that we are at firſt *wonderfully framed*: nor can I determine what *particular uſe* the *ſoul* makes of all the *parts* and *ingredients* of our *humane bodies*: But *this* appears unto us *daily*, that the conjunction betwixt the Soul and Blood, and the dependance of our Life thereon, is not ſo *great*, or intimate, as that upon the *effuſion of a little*, no, nor of a *great deal of the bloud*, Death, or any debility, *extraordinary* and *durable*, ſhould enſue *unavoidably*: and if *it* happen but *ſometimes*, 'tis apparent *thereby*, that 'tis but *accidental*, and not a *proper* conſequence of *that effect*: 'Tis manifeſt, that the *operations* of the *Soul* are not reſtrained to *one determinate proportion of bloud in every body*: nor to the *ſame* in *any*: albeit that there ſeem requiſite in *all Animals*, that there be *ſome bloud*, or what is equipollent thereunto: 'Tis alſo manifeſt, that this *Bloud*, (for which ſome are ſo *ſollicitous*) doth continually *expend and waſte it ſelf in nutrition*, (and that even the *nouriſhed parts* are in a continualexhauſtion) ſo that without ſupply, it would *degenerate*

Plempius fundam. medic. *l.* 2. *c.* 1.

Botallus de ſangu. miſſ. *c.* 34.

into

nto choler, (except in thoſe *miraculous faſts*) and diminiſh to *little* or *nothing*: as appears upon *great faſtings*, and *ſeveral diſeaſes*. 'Tis no leſs manifeſt, that upon *great evacuations of bloud*, by *wounds*, or *otherwiſe*, when the *Bloud* hath been ſo exhauſted, that very little can be imagined to remain, yet in a *few dayes* the *veins* and *arteries* do fill again, and nature is ſo repleniſhed and *vigorated*, that this *loſt bloud* ſeems not only *as good*, in order to the *functions of life*, but *better*, in order to *health* and *ſtrength*, ſince the production of *this laſt* (in the end of diſeaſes) is accompanied with *convaleſcence*, whereas the *precedent* did not *hinder the indiſpoſition*.

Id ibid. c. 33. ſect. 7, 8. & c. 35.

Out of what hath been ſaid, the Anſwer to this Objection is *facile*: viz. *The Blood is not ſo the ſeat and reſidence of the Soul, nor ſo abſolutely neceſſary to Life* (granting all that can be deſired of us) *as that ſome of it may not be let out, without preſent danger, or irreparable detriment*: ſo that, *if the motives for* Phlebotomy *be cogent, or ſo probable, as to render the Action prudential, no difficulty can ariſe from this ſcruple*. It is written in *Deut.* 24. 6. *No man ſhall take the upper or nether milſtone to pledge; for he taketh a man's life* [or ſoul] *to pledge*. Here the *milſtone* is called the *life* or *ſoul of a man*, as much, and as *properly*, as ever the Blood is any where elſe: But, though there be a *prohibition* for a man to *deprive* his poor neighbour thereof, as of the *ſupport of his Life*, yet undoubtedly none was ever *interdicted* by virtue of this precept, to help the diſtreſſed *Miller* to pick and mend his *Milſtones*.

His third Argument is this.

" Moreover, one would think, it ſhould put a ſtop to p. 7.
' their *prodigal, profuſe bleeding*, if they did but conſider,
' with what *difficulty* Nature brings this *Solar Liquor* to
' *perfection*, how many hazards of becoming *ſpurious* and
' *abortive*, it paſſes through; how eaſily it is ſtained by an
' *extraneous tincture*; how often intermixed with ſome-

'thing *allogeneous* and *hoſtile* to it; how many elaborate
'*circulations*, *digeſtions*, and *refinings* it undergoes, before
'it be throughly *animated*, and made fit for the right *uſe*
'of the immortal Soul.

One would imagine by *this Objection*, that the *Generation of the Bloud*, were as *difficult* a work, and required as much of *ſollicitude*, as the *Philoſophers ſtone*; and that the *leaſt errour* would diſappoint the *proceſs*, and eject the *poor ſoul* out of its *tenement* and *manſion*. But there is not any ſuch thing; he that conſiders the perpetual ſupply of *Chyle*, by the *Ductus Thoracicus*, and with how much eaſe it is transformed a great part into *Blood*, by the *ſimilar* action of that which *pre-exiſted in the veins*, (together with the *concurring* aid of the *Heart*, and *ſanguiferous emunctory veſſels*; and the *previous* alterations in the *ſtomach* and *inteſtines*) will imagine neither the *production of Bloud*, nor the *reparation of it*, to be ſo *tedious* and hard a matter: Nor is it true, that the *Bloud* is ſo eaſily ſtained with *hoſtile tinctures*, ſince it is a *liquor* that is in *perpetual depuration*, and hath the convenience of ſo many *out-lets* to diſcharge it ſelf by. Neither will every *crudity*, in the *immature Chyle*, or *bloud*, render the *blood* unfit for the *uſe of the immortal ſoul*: there is *extraordinary*, and *unimaginable difference* betwixt the *bloud* of one perſon and another, (as appears upon *diſtillation*, *burning*, and *mixing it with other liquors*) yet are *all theſe* within the *latitude* of *Health*, and with *equal perfection*, exerciſe the operations of *Life*: Nor doth every *allogeneous mixture* vitiate or deprave the *bloud*; for the *Chyle*, *Bloud*, and *Fleſh*, retain *ſome particles* of the *original food* taken into the ſtomach: hence it is, that *ſheep* fed with *peaſe-ſtraw* (though as fat as others) yield a fleſh *differently taſted* from other *mutton*: the like is to be obſerved in the *feeding* of other *Animals* generally: Nor is this more evident in *other Animals*, than 'tis in *Men*; for, not to mention thoſe *Medicaments*, which, by the alteration

tion they make in the *Urine*, do demonstrate they have passed along, and been once mixed with the *bloud*; as *Cassia*, *Rhubarb*, *Annise-seeds*, *&c.* " *In fonticulis observa-* Domin. de Marchettis, Anatom. c. 9.
' *vi, quod si præcedente die aliquis allium aut cepam come-*
' *derit, pus quod in fonticulo est odorem allii aut cepæ obtine-*
' *bat: sanguis autem qui per fonticulum expurgatur, non nisi*
' *per venas expurgari potest; unde possumus dicere, quod*
' *sanguis acutum odorem detinere possit.* The like *phænomenon* is to be observed in *wounds* and *ulcers*, which feel *detriment*, according to the *various food* and *drink* of the patient. Nay, in *pleurisies*, and other *wounds*, it hath been taken notice of, that the *purulent* matter hath discharged it self by the *veins*, (re-mixing with the *bloud*) into the *intestines*, and by *urine*. The *Bloud* of some persons in *perfect health*, hath been observed to *stink* worse than *rotten eggs*, even as it was issuing from the *arm*, upon *Phlebotomy*; yet when it was *cold*, it did not *stink*, nor seemed to differ from the best *bloud*, except that it was of a more *beautiful red* than is usual. I conclude therefore, that in this Argument many *falsities* are contained, and there is nothing of such force, as to deterr a *prudent Physician*, who understands the *rules of his Art*, and those *cautions* which are suggested to us in *Phlebotomy*, to let his Patient *bloud*, and emit some of this *solar Liquor*.

Domin. de Marchettis; Anatom. c. 10. Paræus chirurg. l. 16. c. 49. Simon Pauli de febr. malignis sect. 11.

His fourth Argument.

" They should never attempt, yea rather abhorr, to p. 89, 90.
' enervate in the least, by the Lancet, the *strength*, with
' its *correlative* bloud and spirits, *without which there is*
' *no hopes of attaining a desired Cure.* For it is a most
' *established verity*, taught by *Hippocrates*, that *Naturæ*
' *sunt morborum medicatrices*, the most assured means of
' *sanation*, is to keep up the vital pillars, without which,
' all falls to ruine. So that *Van Helmont* is without con-
' troversie in the right, when he sayes, *utcunque rem ver-*
' *teris, ignorantiæ plenum est procurata debilitatu sanare*
' *velle.*

'*velle*. i. e. make the beſt you can thereof, It ſavours of 'groſs ignorance, to aſſay to heal, by bringing one into 'a weak condition. And p. 84. *de febr. Satis ſit, ſatis 'ſit Medico* (ſaith the ſame Author) *quod æger alioquin 'inexcuſabili debilitate labaſcat, per morbum, medias, in-'appetentias, inquietudines, dolores, anxietates, vigilias, 'ſudores, &c. neque idcirco fidus auxiliator debet debilita-'tem addere debilitatibus; fraudulentum eſt ſublevamen 'quod venæ ſectio affert; ejuſque tam incertum eſt remedi-'um quod nemo medentum hactenus auſit polliceri ſanationem 'inde futuram.* One would think it is enough, and too 'much, for the poor ſick man to be brought low with the 'diſeaſe, faſting, want of appetite, reſtleſneſs, pains, an-'guiſh, watchings, ſweatings; wherefore, in ſuch a 'caſe, whoſoever is a truſty ſupporter, ought in no wiſe 'to add weakneſs to weakneſs: all the ſuccour the Lan-'cet can afford is deceitful, and all the addreſs thereby 'is of ſuch uncertainty, that no Phyſician dare venture 'to make a promiſe of a *perfect cure* by this means, and 'to keep one from a relapſe.

I muſt except againſt the authority of *Van Helmont*, in the caſe, as of a perſon whoſe credit is ſufficiently taken off, by what I have alledged elſewhere: I muſt not be concluded, but by the judgment of (a) *underſtanding practitioners*: and in *Phyſick*, I muſt not allow him to have been an *intelligent perſon*; and it is notorious, that he was a man of no practiſe, and conſequently no *fitting judge* of the *efficacy* and *inefficacy* of *Medicaments*. It is a ſaying in the *Civil Law*, *plus valet umbra experti ſenis, quam eloquentia juvenis*: And thoſe *Philoſophers*, who would, upon certain *prejudicate opinions*, and *pretences* of *reaſon*, determine of *Medicinal caſes*, are exploded even by *Galen*: nothing is firm in *Phyſick*, but what is confirmed by an *happy experience*: and tis an *imbecillity of judgment* (ſaith the great *Stagirite*) *to deſert experience, and adhere to reaſon.* If *Helmont*

(a) ὁι γὰρ ἔμπειροι περὶ ἑκάστα κείνην ἠρέμα τὰ ἔργα, καὶ δι' ὧν, ἢ πῶς ἐπιτελεῖται, συνίασιν, καὶ ποῖα ποίοις συνᾴδει.
Ariſt. Ethic. l. 10. *c.* 9.
Jo. Franc. Ripa, tract. de peſte. *c.* 7. *ſect.* 17.
Ariſt. l. 8. Phyſ. *c.* 3. *t.* 22. & 1 *de* ort. & inter. *c.* 3. *t.* 59.

mont was neither converſant in the *Experiments of others*, nor did himſelf experiment the inconveniences of *Phlebotomy*, what doth his *Aſſertion* or *Negation* ſignifie in the caſe? Beſides, 'tis but a *ſingle* teſtimony againſt the *Experiments* of *judicious* men in all *Ages* and *Countries*. As for *his Reaſon*, 'tis moſt infirm. *We muſt not adde imbecillity to imbecillity*: even this is *notoriouſly falſe* in Phyſick: for, by the ſame reaſon, *we ſhould not reduce them to a ſlender diet*, no nor ſo much as *ſweat them*; for after *much ſweating*, *every man feels himſelf weaker for the preſent*; the ſame may be ſaid of *vomits* and *Emeto-cathurties* (ſo much commended by my Adverſary) that, *during their operation*, they add to the *imbecillity* and ſickneſs of the Patient: upon *this reaſon*, none might ſcarifie a Gangrene, cut of the ſphacelated part, or make uſe of ſeveral *vexatious operations* in *chirurgery*. Beſides, who would not allow us to create him a *little trouble* or *weakneſs*, (eaſie to be repaired) thereby to recover him from a *greater evil*? there are *ſome times* when the *leſſer of evils becomes eligible*, and puts on the qualification of being *Good*: there are ſome times when we are directed to *cure one diſtemper by introducing another*. But to proceed; I do deny that *Nature is debilitated by bleeding in diſeaſes*, if the rules of our Art be obſerved: for, we daily ſee, that after *bleeding*, Nature doth with more *eaſe* and *ſpeed* diſcharge her ſelf of the *diſeaſe*; and uſually thereupon enſues ſigns of *concoction in the urine*, a *pronity to ſweat*, and an *inclination to ſolubility of body*, and a *more ſtrong pulſe*: which, as they are our *daily obſervation*, ſo they do demonſtrate, that Nature is not weakned thereby. Heretofore it was uſual, after conſideration of all due circumſtances, to let the ſick bleed, even *till he ſwooned away*: and that with very *good ſucceſs*, in thoſe Fevers called σύνοχοι. "*Sub quo caſu* Hippocrates *atque* 'Galenus *veniti non ſunt, donec animus deficeret, ſemel* 'detrahere *ſanguinem. Quam ipſi rem ratione & experien-* 'tia *ducti tentaverunt. Profuſa namque hac inanitione pri-*

Steph. Roderic. Caſtrenſ. quæ ex quib. *l.* 4. *c.* 7, 8.

Jodoc. Lommius de curand. febr. contin. c. 3.

'*mum*

With this opinion of J. Lommius, doth Citesius agree, de usu Phlebotom. c. 4.

'mum homo in contrarium agitur statum, celerrime ex de 'fectu animi refrigeratus: post autem alvus subinde pro- 'rumpit, vel bilis ubertim evenitur, vel certe copiosis su- 'doribus corpus perfunditur, atque hinc alios protinus con- 'tingit convalescere; alios plurimum juvari. This they practiced in the beginning of *such Fevers*, and the practice did so far ennoble *Galen*, that 'twas proverbially said of him, that *He stabbed Fevers*. He relates of himself, that he took away at once from a Patient *six pound of blood*, and presently put an end to the *Fever*, the party not finding *any diminution of his natural strength thereupon*. But this kind of *excessive Phlebotomy* hath been long discontinued by *Physicians*, not that they could absolutely condemn it, but out of *cautiousness*, lest the *ill success* afterwards should be imputed unto *them*: yet some *Countrey-surgeons* do still continue it. I knew one in *Warwickshire*, who would, in the beginning of any *Fever*, bleed the Patient thirty or forty ounces, or more, in case he did not faint: and, really, with *great success* in *rustick bodies*. A Captain in the *Parliament-Army* assured me, that when the *spotted fever* was in the Camp, their Chirurgeon did, in the beginning of the distemper, *bleed* them till they fainted; then put them to bed, giving them a *good Cordial*, so they *sweat*, and recovered presently. He himself was served so; the *Chirurgeon* bled him in the open field, the *bloud* fell on the ground, to the quantity (as he guessed) of a *quart*, when a *Lipothimy* approached, he put him to bed, and giving him a *Cordial*, he fell into a *sweat*, and was recovered perfectly in *very few dayes*. There is no doubt but the *practice* was *justifiable* in men of a *convenient habit of body* to bear it, and where neither the *climate*, (which [a] oftentimes is *particularly* repugnant to large *Phlebotomy*) nor *idiosyncrasie*, (which [b] sometimes happens) or *evil diet* preceeding, or the *particular malignity of the venenate disease*, nor the *prejudicate opinion* of the *people* do contraindicate. It hath authority from *Hippocrates*, *Galen*, *Avicenna*,

Galen. de sang. miss. c. 14.

[a] Citesius *de usu Phlebotom.* c. 5. Rolfinc. *meth. medic. spec.* c. 4. sect. 2. c. 11.

[b] Rolfinc. *ubi supra.*

cenna, and many others : *Nature* doth ſeem to *direct us thereunto*, by her own *exceſſive evacuations* in that kind, by which diſeaſes are *frequently* acted : and no *evacuation* is to be accounted *immoderate*, which is *beneficial*. By this, and *expurgation*, even to *Lipothymy*, in the firſt beginning of *ſeveral diſeaſes*, men were cured preſently, nor did the maladies proceed to thoſe *times* which in the *uſual method* they make their *progreſs* through. In my *Exercitations* againſt Dr. *Sydenham* (as yet *unfiniſhed*) I have entreated largely of the *ſeveral methods of curing*, which I ſhall not now *tranſcribe*. As for that way of *bleeding* which is *now* generally in uſe (though practiſed with a *great latitude* in *ſeveral Countries*, and by *ſeveral Phyſicians* in the *ſame Countrey*) it is moſt manifeſt that if *due circumſtances* be regarded, and all other *medicaments* dexterouſly adminiſtred, it is ſo far from *debilitating Nature*, that it adds to its *ſtrength*, mitigateth the *preſent ſymptomes*, prevents the *violence of the future*, and *concocteth the diſeaſe* apparently. I will not undertake to juſtifie the *demeanour* of each *particular Phyſician*, any more than I will anſwer for their *intellectuals* and *skill in Phyſick* : It is not the reading of *Sennertus* and *Riverius*, with a little *knowledge* of the new diſcoveries in *Anatomy*, and a few *Canting terms* about *Fermentation*, *texture of bodies*, or ſuch like *knick-knacks* and *Conundrums* of the *novel Philoſophers* which accompliſh a man for **practice**: Theſe men will never come to be ranked with *Valleſius*, *Mercatus*, *Fernelius*, *Duretus*, *Rondeletius*, *Maſſarius*, *Septalius*, *Claudinus*, *Crato*, or *Rulandus*. If *Experience* be our *Guide*, let us inform our ſelves by the *Hiſtories* of ſuch as *they* have given us of *Epidemical* and *peſtilential diſeaſes*, and of *particular caſes*, as alſo the *cures*, and following *them* let us come to *practiſe*, and, not deſerting our *own reaſon*, let us be *cautioned* by *them* : Theſe others for want of *judgment* to conſider *each circum-*

Dilect. *Luſitan.* de venæ ſectione cap. 14. Artic. 4.

G. Fletcher's History of Russia, c. 28, p. 279.

ſtance cannot make an *Experiment*, or *relate it*: whileſt they extenuate the credit of the *ancient* and *modern Phyſicians* that are not *Innovators*, (though more *obſerving* and *experimental* than themſelves) they do it only to *excuſe their ignorance* in that kind of *Learning*, and whatever they have of the *Lord Bacon*, they have this of the *Ruſſe* in them, that *they neither believe any thing that another man ſpeaketh, nor ſpeak any thing themſelves worthy to be believed.* For ſuch as *theſe*, or any elſe that do not practiſe *Phlebotomy* according to the *rules of Art*, I cannot make any *Apology*: nor do I think that *their errours* ought to extend ſo far as to diſparage *all Phyſicians* who demean themſelves *prudently* and *diſcretely*: Notwithſtanding *all our care*, ſome *Patients* will *dye*; no *Phyſician* can ſecure all men from what their *frail condition* hath ſubjected them unto: If our *Method* and *Medicaments* be ſuch as the *general rules of Medicine*, and an *Experience* **generally** *happy* do warrant, 'tis as much as can be expected from *us*; and the *Imperial Laws* allow of this *defence*, though they *puniſh* the *immethodical* and *novel* Experimentators, and the Ignorant. *Sicut Medico imputari eventus mortalitatis non debet, ita quod per imperitiam commiſit, imputari ei debet: pretextu enim humanæ fragilitatis delictum decipientis in periculo hominis innoxium eſſe non debet.*

P. Zacchias Qu. Medico legal: l. 9. conſil. 40.

Vide I. Franc. Ripia tract. de peſte, c. 7. §. 64, 65, 78, 104.

To conclude this Argument, I ſay, that although it often happens that diſeaſes are cured by ſole Phlebotomy: *Evenit ut ſæpius miſſio ſanguinis ſola curationem perficiat——Miſſo ſanguine ſæpe ſponte naturæ expurgatur corpus alui proſluvio, vomitu, aut ſudore ſuccedente*——Yet no *wiſe Artiſt* will rely upon *that alone*, but with the addition of *other auxiliary medicaments*: Herein *Spain* and *France* are pretty well agreed: And as no *wiſe man* will **undertake** to cure by bleeding *alone*; ſo it is moſt *fooliſhly* done of our *Helmontian* to *demand*, or *expect* it, as *he* doth here.

Valles. Meth. Med. l. 2. c. 3.

Vide Riolan. de circulat. Sanguin. c. xx Vallis. meth. medend. l. 4. c. 2.

I

I come now to his fifth Argument.

" The means to let out *bad blood* without re- Pag. 105,106.
" moving the *efficient* cauſe thereof, is no *direct method*
" of healing.

" Now *Phlebotomy* lets out *bad blood* without re-
" moving the *efficient* cauſe thereof. *Ergo*, Phlebotomy is no *direct Method* of healing.

" The *Major* is proved thus: Whatſoever ſuffers the cauſe to remain, can never remove the effect: For *manente cauſa manet effectus*.

" Now *Phlebotomy* ſuffers the *cauſe* to remain, *Ergo*, it can never remove the *effect*.

" The *Minor* is made good by *frequent experience*: If the *cauſe* of bad blood were *cut off*, the *Feaver* or *ſcorbute* depending (according to Dr. *Willis*) upon the degeneration, *Sal* and *Sulph.* therein, would quickly ceaſe: but we plainly ſee the contrary; for after the veins are much depleted, the diſeaſe becomes more truculent, and oftentimes mortal; which *could never be* if this depraved blood were any other than a product or an effect of an eſſential morbifick cauſe. The ſame agent which in ſanity ſanguifies regularly without any conſiderable defection, in ſickneſs becomes exorbitant, ſending out a vitious juyce into all parts: be it *good* or *bad*, it ſtill ſprings from a *root*, which continually feeds the branches: ſo that it cannot be other than great *folly* and *wrong to the Patient*, to let out that *juyce*, though it ſeem never ſo *corrupt*, when another of the *like condition* muſt needs enter into its place, derived from the *ſhop* the *duumvirate*, where it firſt receives a previous rudiment, which ought in all reaſon rather to be reformed, than to give vent to thoſe eaſily *evanid* particles *inſeparably* joyned with this *ruddy liquor*, how ill ſoever repreſented. If all contained in the *reins*

He ſhould rather have regarded the *ſecond* then *ſixth* digeſtion.

‘ (ſuppoſed to be *corrupt*) were diſcharged, yet as
‘ long as the *ferments* principally of the *firſt* and *ſixth*
‘ *digeſtion* deviate from their right ſcope, there would
‘ in a ſhort ſpace be a ſuccedaneous repletion of a mat-
‘ ter equally contemptible, yea *worſe*, in reſpect of an
‘ enervation of *ſtrength*, than before.

This *Argument*, though our *Helmontian* rely ſo much upon it, is a pure *Paralogiſme*.

Firſt, *He* ſuppoſeth that **we** uſe *Phlebotomy* in **all** diſeaſes, **as a direct method of healing:** which is not *true*, except in *ſome maladies*, as *Apoplexies*, *Squinancies*, *Hæmorraghies* or *great eruptions of blood*, ſome *Atrophies*, and ſometimes in *Feavers*: in which 'tis *frequent* with *us*, to rely *ſolely* or *principally* upon *Phlebotomy*: yet even *here* we would think it very improper to admit of *our Phlebotomy* to be ſtiled our **Direct Method of curing**, becauſe it is but a **part of our Method**, which will include, if not *ſome other preſcriptions*, yet at leaſt **byet.** In many caſes *we* uſe *Phlebotomy* as one *part* of our *Method*, but not as the *principal*: as when we uſe it *antecedently* to other remedies *Pharmaceutical* and *dietetical*, to *prepare way for*, or *facilitate* their *happy operation*. I am not *now* to write *Inſtitutions in Phyſick* for the documentiſing of this Diſciple of my Lord *Bacon*, 'tis enough that he may learn any where almoſt (as in *Valleſius*, *Mercatus*, *Claudinus*, and *Plempius*) that we propoſe more than *one ſcope* to our ſelves in *Blood-letting*; neither is it ever (except in diſeaſes ariſing from a *partial* or *total Plethora*) our *direct method of healing*: If it be but a *part* and *neceſſary* or *uſeful part* thereof, we are ſufficiently *juſtified*. Thus his *Major* is enervated: for if he would have oppoſed the *modern practiſe*, he ought to have urged it thus.

‘ ‘ The means uſed to let out *bad blood* without
‘ removing the *efficient cauſe* thereof, is no *direct* Me-
‘ thod

thod of healing, **nor an useful or necessary part thereof.**

This is manifestly *false*, as I shall shew anon. As to his *Minor*, That *Phlebotomy lets out bad bloud without removing the efficient cause thereof.* This would the *Ancients* deny, who *bled* their Patients in many cases until they *swooned* or *fainted*, with great *success*: and we must say it is not *absolutely true*, there being no *Practitioner* (I believe) but hath seen *some cases* in which *sole Phlebotomy* hath effected the *cure*: he may see many Instances of *this* in *Botallus*, and that in diseases where the *body* was undoubtedly *cacochymical*: I have seen *Agues tertian* and *anomalous* perfectly cured with *once bleeding* in women with child: and in *children* I have seen some *Atrophies* so cured, that the *principal* cause of their *recovery* was to be attributed to their *Bleeding*: the like I have observed in several *Chronical* diseases, even in *inveterate quartanes*: as also *others* have done: nor is there any thing more common almost in our *Cases*, than the relation of *several diseases* absolutely cured by *single Phlebotomy*; which I shall not transcribe here, but in my large discourse of *Phlebotomy* (in *Latine*) I intend to represent all *such cases* at large, with *their circumstances*, and the History of *Phlebotomy* with all that *variety of success*, which *judicious* Practitioners relate of it in *several diseases*, and *persons*. I add now, that **No man can be an accomplished practitioner who is not versed in the History of Diseases, and particular cures:** for the *general rules* and *directions* make no more a *Physician*, than *such* a knowledge in *Law* would do a *Lawyer*; the *res judicatæ* import more with *us* than they do in *Law-cases*; and as *Reports of the Judges* in special cases must be known by a compleat *Lawyer*, so must our *Book-cases* be our *presidents*, and regulate our practise. *Duobus enim tanquam cruribus innititur Medicina, neque solis theoreticis rationibus contenta, insuper*

Brune Seidelius de morbis incurabit. p. 57.

ſuper etiam practicas experientias particularium requirit, & indefeſſam ad ſingulos caſus intentionem.

Thus is his *Minor* falſe, as was his other Propoſition: and it ſhould have run thus. **But Phlebotomy lets out the bad blood without removing the efficient cauſe thereof, or conducing thereunto.**

But he proceeds to defend the *Minor* thus. *If the Cauſe of bad blood were removed, then would the effect ceaſe: but oftentimes we ſee that notwithſtanding ſuch a depletion the diſeaſe continues, and if it be not mortal, yet it becomes more truculent.* Here he commits the *ſame errour* that before, *expecting a greater effect from Phlebotomy than we propoſe generally to our ſelves in it*: we do it ſometimes for *revulſion* of the matter flowing to any part, as in ſome *Pleuriſies*, *Squinancies*, the *Colick Bilious*, and Rheumatiſmes, *&c.* wherein we never rely *ſolely* upon *bleeding*, and though oftentimes the *effect* tranſcend our expectation, yet do we not *preſume upon it*. Sometimes we *let blood* for *prevention* of future diſeaſes, as in *great contuſions* and *wounds*: Sometimes we *let blood* only to prepare way for *future Pharmacy*, " *Ita plerumque in febribus mit-*
Valles. meth. medend. l. 2. c. 3.
" *titur ſanguis, qui non ſuperat naturalem menſuram, ne-*
" *que ſimpliciter, neque in hoc homine, ſed quia niſi mit-*
" *tatur, ob febrilem calorem, qui adeſt, & ſuccorum*
" *putreſcentium miſtionem, corrumperetur, ac fortaſſe*
" *malignè; & cutis rareſactioni, & ventilationi, &*
" *vaſorum relaxationi ad futuram expurgationem ne-*
" *ceſſariæ, impedimento eſſet. Itaque mittitur, non quia*
" *multa ſubeſt copia, ſed quia ea quæ ſubeſt, tunc eſt in-*
" *utilis, & noxia, ac proinde, facultate ferente deponen-*
" *da, etſi cauſa morbi non inclinet ad ideam ſanguinis,*
" *modo non ab ea plurimum evariet*, i. e. Thus in feavers we uſually let blood, not that the *blood* abounds above its *due proportion*, either in general, or in reference to this or that individual; but becauſe the *blood* which flows in the veins is *infected* with a *feavouriſh* heat,

heat, and would be corrupted *therenpon*, and by reaſon of the *intermixed humours* now inclined to *putrefaction*, and that perhaps joyned with *malignity*, for the prevention thereof, and leaſt that *plenitude* and *depravation* of the Blood ſhould hinder that *tranſpiration* in the habit of the body, *ventilation* of the blood, and *laxity* in the veſſels, which is *requiſite* for the *ſubſequent purge*, do we uſe Phlebotomy: not imagining that there is any *ſuperfluous abundance* of blood, but that there is then in the body *ſome* that may well be *ſpared*, and which, *if the Patient hath ſtrength to bear it*, may with *prudence* be let out to prevent ſo great dangers as are *imminent*, and to ſecure unto us the *good effect* of the ſubſequent *Phyſick*. And if the *diſeaſe* do ſometimes encreaſe upon *Phlebotomy*, it behoveth *wiſe perſons* to diſtinguiſh whether thoſe *ſymptomes* happen *by reaſon of bleeding*, or only *ſucceed it* in courſe, the diſeaſe being in its *increment*: for this makes a *great difference* in the caſe: as alſo whether amidſt thoſe *ſymptomes* (which are *in due courſe* moſt violent in the *progreſs* and *ſtate* of the diſeaſe; whereas *we* bleed *uſually* in the *beginning* only) there be not ſome that yield ſigns of *concoction* and *melioration*, which if they do, as we may juſtly attribute thoſe *hopeful* conſequences in part to *Phlebotomy*, ſo we need not be amazed at the *preſent truculency* of the diſeaſe; which affrights none but the *ignorant*: If notwithſtanding all our care, and *due adminiſtration of Medicaments according to Art*, the Patient do dye, yet is neither *Phlebotomy* nor the other Phyſick to be blamed, but we ought rather to reflect upon *Phyſick*, that 'tis a *conjectural skill* in the moſt knowing men, and that we are not as *Gods* to inſpect into the *bowels* and ſecret cauſes of diſeaſes, that beſides the *ſpecial judgment of God* upon *particular perſons*, all diſeaſes are not curable in *all individuals*, either by reaſon of the variety of diſtempers complicated, which interfere with and

contra-

contra-indicate one to the other, or for ſome *unknown idioſyncraſy*, or other *intervening cauſe* which defeats *our Methods*, as well as it diſappoints the **Arcanum** of *Pepper-drops*. I muſt here take an occaſion to remind this *Helmontian*, that *he* doth ill to diſparage *Phlebotomy*, by reaſon that after *it* there may follow ſome *truculent Symptomes*, and yet to reject that *imputation* where his *Dietetical* rules are in diſpute. " When *he* ' gives his *vinous* and *ſpirituous liquors in Feavers* (a practiſe not peculiar to the *Helmontians*, but allowed, with regard to due circumſtances, by *Hippocrates* not only in *diaries* but *acute-feavers*: ſo *Galen* would have told this *Ignoramus*) ' if any *ſeemingly frightful* ' Symptomes appear, as *extraordinary heat*, an *inquie-* ' *tude*, a *little raving*, a *ſwerving from right reaſon*, the ' Patient muſt not be ſtartled in a *vulgar manner*, but ' be ſatisfied that theſe are but the effects or fruits of ' an Hormetick motion in the Spirits excited and in- ' creaſed by good liquors, eaſily united with them for ' the routing and putting to flight every way what- ' ſoever doth diſturb its vital government.— Though *Hippocrates* ſay *it is good in all diſeaſes, that the Patient retain his ſenſes*; though he reckon *inquietude* and *reſtleſsneſs* in the ſick amongſt *evil ſigns*, yet our *Helmontian* diſſents from *him* whatever *time of the diſeaſe* it be, and whatſoever other circumſtances attend thereon: " *For oftentimes madneſs, deviation from* ' *the right underſtanding, a Lethargical or ſleepy diſpo-* ' *ſition ſuddenly break forth.* Nihil eſt quod tam ' magnifice prodeſt quod non aliquo ex modo obeſt. ' *What matters it, if the heat be magnified (beſides the* ' *main purpoſe) to ſome ſmall trouble, if ten times* ' *greater benefit accrue to the ſick. It is impoſſible any* ' *Phyſician ſhould perform his duty as he ought, if he* ' *boggle at the foppery of heat and cold, meerly momenta-* ' *ny and tranſient, often deluding our ſenſes.* Surely *he* that is thus negligent of the *Animal faculty* in its

P. 168, 169: *Valles.* in *Hippocr.* de victu in morb. anot. l. 3.

P. 169.

principal

principal operations, may bear with a pitiful *Galeniſt* for not regarding much the *loco-motive ſtrength*, whilſt he is as ſollicitous as any *Helmontian* to ſupport the *vitals*: and let any one judge which is moſt likely to impair the *vital faculty*, a little *blood-letting* duly adminiſtred, or ſuch an increaſe of the *feavouriſh heat*, *reſtleſsneſs*, *deliriums*, *phrenſies*, *lethargies*, as our *Author* here deſpiſeth.

I muſt not yet diſmiſs him: not that I intend to laugh at his *ſix-fold digeſtion* (he might as well make a *doſen of digeſtions*) but it is neceſſary that I tell him that the *production of good* or *evil blood* doth alwayes depend upon *one root that feeds the branches*: for 'tis poſſible that the *ſtomack*, and *pancreatick*, or *bilious* mixtures in the *guts* may not be *faultleſs*, and yet the *blood* of the Patient either not *vitiated*, the errors of the *firſt concoction* being amended by the *primigenial ſanguifying Blood* (for 'tis the *Blood in the veſſels* which *principally* ſanguifies) or if it be *depraved*, yet not ſo as to generate any diſeaſe, or *abbreviate the life*: for *cacochymical* perſons with a little can live more long, and more free from diſeaſes than thoſe of a *purer* and *more generous blood*: Nor is it leſs *true* that oftentimes it happens that the *blood* is infected with *recrementitious*, *heterogeneous* and *noxious* mixtures from obſtruction of the pores, or other *occaſional cauſes*, wherein the *ſtomach* and *vitals* (otherwiſe *ſound* and *vegete*) are only oppreſſed and diſtempered *by accident*, ſome of thoſe *impure humours* being diſcharged upon *them*: and in *theſe caſes repeated Phlebotomy* alone may *cure*: If the credit of *Botallus* will not ſatisfie *him* herein, let *him* believe his beloved *Hippocrates*, a man who did *extraordinarily* practiſe *blood-letting*, ſo as that the *French* do impatroniſe him to their *Phlebotomy*; he tells us this ſtory. "*A certain man* "*amongſt the Oeniada was ſick when he was faſting, he* "*felt as it were a great ſuction in his ſtomach, and a vio-* "*lent*

Bollonius Epidem. & ephemerid. l. 1. p. 101.

Vide *Riolan.* de circulat. ſang. c. xx.

Hippocrat. Epidem. l. 5. c. 11. 6.

lent pain: and after he had eaten any meat, as it digested, his pains returned, He grew very tabid, and wasted away in his body; his food yielding him no sustenance, but what he took came away in ill-concocted and adust stools. But when he had newly taken any sustenance, at that instant he felt none of that vexatious pain and suction: He took for it all manner of Physick, both emeretics and cathartics; but without any alleviation. But being let blood alternately in each arm (or hand) till he had none left in his body [that was vitious] he amended upon it, and was perfectly cured.—

φλεβοτομώμενος δὲ ἐν μέρει ἑκατέρην τὴν χεῖρα ἕως ἐξαρθῆναι ἐγένετο, ἔπειτα ὠφελήθη, καὶ ἀπηλλάγη τῆς νόσου.

See *Anton. Benivenius* his medicinal observat. c. 44.

Read but that case you that are so *timorous*, with the Comment of *Van der Linden* in his *Selecta Medica* c. xiii. and tell me if upon *Phlebotomy as ill blood alwayes succeed as is let out.* I could add more *parallel stories*: But to demonstrate unto this *Pyrotechnist* that *single Phlebotomy* will amend and inrich the mass of *Blood*, I propose this case, *An ancient Gentlewoman of a very strong and corpulent habit of body, but frequently troubled with hysterical and hypochondriacal vapours, was taken with a violent catarrh upon her stomach, together with great pains in her right and left hypochondria, as if the liver and spleen had been tumified: sometimes she complained of an insupportable acidity in her stomach, and sometimes a saline humour molested her: Sometimes she fell into cold clammy sweats, sometimes her sweats were so hot that she complained as if her skin were burnt: and even when her stomach felt any alleviation, she complained of a burning fire as it were in her bowels near and in the region of her liver: a perpetual sputation did follow her. I being sent for, after several Medicaments prescribed methodically, but with little or no alleviation, I proposed earnestly that she should be let blood, notwithstanding she were above sixty years old: I took away eight ounces or more: She found immediate alleviation: there seeming no default in the blood or serum, I burned the blood in an arched fire, it came to ignition, but flamed not*

not at all: but crackled like Bay-salt, and after some while a sudden eruption of ventosity made such a noise as equalled the cracking of a Chesnut in the fire: She took a stomack-powder of Ivory, Pearl, Crabs-eyes, &c. and was pretty well for three or four dayes, but upon a small fright relapsed: I bled her again as before, and in that short time (in which she had taken very little sustenance; but behold this blood (which looked no better than the other) did burn with a vivid and lasting flame as well as any I ever tryed in my life, and without any sign of flatulency: She recovered presently after with some further Medicaments, but not so as to be perfectly well at stomach of a long time. I doubt not but if others would try that way of *burning blood*, they would soon be convinced that *Phlebotomy* makes a great alteration therein.

But I proceed to his other Argument.

This is taken out of *Van Helmont*, whose *Latine* words I shall not transcribe now, but only the *English*. p.107,108.

"Let them make it appear if this do not imply a "contradiction, that a *Feaver* hath the property to *pol-* "*lute the blood*, and that this *property* can be taken away "*a posteriori*, by a posterous manner, to wit, by *with-* "*drawing what is putrified*. For if first the *fouler blood* "be let out, they open a vein *again*: all this while they "overthrow and confound the *strength*, and so there- "by wholly disappoint a *Crisis*. But suppose some- "times a fresh *ruddy blood* run out, they presently cry "as cock-sure, that a whole troop of diseases is cut off "at the first dash, as if the *resting place* of the Feaver "did only extend from the heart to the bending of "the arm, and the good blood did take up its abode "about the liver.

This Argument proceeds upon a moſt *groſs falſhood* in that part of it, where *we* are ſuppoſed to place ſuch a value upon the *colour of the blood* as by the *goodneſs* or *ruddineſs* **thereof** we ſhould eſteem our ſelves as **cock-ſure** *that a whole troop of diſeaſes is cut off at the firſt daſh*: whereas no intelligent *Phyſician* ever thought ſo: for *we* do ſay that the *blood of all men is not alike*, neither as to *colour* nor *conſiſtence* naturally: and therefore in diſeaſes we do not expect to ſee *ſuch*, nor intend to make any *alteration* to ſuch a degree as tranſcends the *natural eſtate* of the body: for 'tis our buſineſs to preſerve each man his *natural habit*, be it *bilious*, *melancholy*, or *phlegmatick*. We do alſo ſay that in diſeaſes the *blood* may be corrupted in its *ſubſtance* and vitiated, and yet the *colour amended*, or not *altered*. *Sæpe ad ſpeciem & viſum purus eſt ſanguis, qui alioqui τῇ ὅλῃ ἰδέᾳ malus eſt: ut contra impurus cernitur ſpecie, qui non ita τῇ ὅλῃ ἰδέᾳ malus eſt.*——And *Jacob. Thevart* his *Scholiaſt* doth obſerve, that ſeveral times *in κακοχρόοις ſanguis laudabilis ipſa ſectione apparet, & qualitatibus alienis præditus eſt, eſt enim acriuſculus & biliuſus nimis.* Nay we are ſo far *indefinitely* from pronouncing a *cure* upon the *ruddy colour* of the *blood*, that in malignant Feavers we make a quite *contrary* prognoſtick. *Peſſimum ſignum eſt* [in febre maligna puncticulari] *& timoris plenum, cum ſanguis vena ſciſſa extrahitur, ſi purus, rubicundus, & inculpatus educatur, veneno ſitatem ſuperare indicium eſt, aut putredinem in penitioribus cordis latitare. In meipſo olim obſervarem; nam ter per hanc febrem miſſo ſanguine, nulla prorſus nota putredinis apparebat, aliis ſignis immani ferocitate ſævientibus.* The ſame is aſſerted and illuſtrated by *fatal inſtances* in *Simon Pauli*, which it would be too long to tranſcribe here. Having demonſtrated unto *him* theſe errors, I ſay further that *we* do not hold the *blood* to be *putrified* in all *Feavers*, as in *Diaries*, nor (many of us) in *intermittent*:

Ballonius Epidem. l. 2. p. 191

Ballonius Epidem. l. 2. p 192

Ballon. Epid. l. 2. p. 167.

Petrus a Caſtro de febre malig. punctic. p 90.

Simon Pauli digreſſ. de febr. malign. §. 12: 14.

tent: not to mention others: and in those *Feavers* wherein 'tis said the *Blood doth putrifie*, We do let *blood* often to *prevent putrefaction*, and not alwayes *to cure it* by *Phlebotomy*: and we do it in order to *cure the putrefaction*, we do not pretend to emit all the *putrified blood* thereby, but only to *alleviate nature of a part thereof*, that so *she may better overcome the rest*; especially being assisted by other *Medicaments*. So that the whole assertion is false, if it import that *any intelligent Physician designs to cure a putrid Feaver* **solely** *and* **directly** by *letting out the putrid blood by repeated venæ section*. I will not deny but some in *France* and *Spain* have *gone about to do it*, but the practise is *generally* condemned by *Physicians* of the *best repute*, and therefore ought no more to be charged on *us*, especially in *England*, then the miscarriages of any *bold Experimentor*, or *Baconical practitioner* at *London* upon the *Colledge of Physicians*. This insolent Disciple of my Lord *Bacon* understands not the *rudiments* of our *Physick*, nor knows what we aim at in the use of *Phlebotomy*, there being *sundry occasions* why *we* use it, and *sundry effects* that we expect *from it*. Neither is he less deceived in saying that *Phlebotomy* (duly administred) *overthrows the strength of the Patient* (I mean that *strength* which is necessary to the *concoction* of the *disease*) *and so thereby wholly disappoints the Crisis*. For it is manifest that by those *profuse Phlebotomies* of the *Ancients* the *Crises* were accelerated: and in ours *promoted*. This is not only manifest out of *Hippocrates* and *Galen*, but confirmed unto us by the *certain experience* of *Forrestus*, and those learned *Florentine Physicians* who composed the *Academy* there for the renewing of the *Hippocratical* and *Galenical* Method in opposition to the most prevalent **Avicennists**. " *Nos igitur Galeno fisi (quoniam sic con-* " *ducit magis, dum vires ferant) sanguinem misimus* " *plurimum, nam bilibre pondus & trilibre in acutis febribus*:

Valles. meth. medend. l. 4. c. 2 *Castellus* de abusu venæsection. p. 60.

Forrest. de febre l. 12. in Scholio.

Novæ Acad. *Florentinæ* opuscula adv. *Avicen.* p. 43, & p. 55.

Ibid. p. 99.

c *febribus: aut magnis aliis morbis ſuperavimus: atque*
c *id non modo impune, ſed & tanta ægrorum tolerantia,*
c *ut nil ſupra eligi potuerit.* —— "*Quam rem abun-*
c *de nobiſcum experientia noſti (ut nos quoque aliquan-*
c *tisper experientiam oſtentemus) ut qui præter cætera,*
c *quorum Paulo ante mentio fuit, & venæ quoque ſectione*
c *abunde uſi ſumus, atque id citra diſcrimen: quin et*
c *exactam illam vivendi formulam, veteribus quidem fa-*
c *miliorem, neotericis vero ne nomine quidem ipſo notam,*
c *inſtituimus. Quo factum eſt, ut jam criſes multæ ap-*
c *pareant, ac velut novus naturæ ordo, ægris fæliciſſime*
c *faveat: Cum antehac vel pharmacis agitata, vel intem-*
c *peſtivo victu impedita, nullas oſtenderet, aut admodum*
c *raras, eaſque non niſi in ruſticis atque infima plebe, qui*
c *nec pharmacorum multitudine, neque ciborum aut potio-*
c *num, fatigari, aut impediri quirent.* I have more willingly cited *this paſſage* becauſe the *renown* of that *Academy* was ſuch that it gave a *check* to the *grandieur* and *prevalence* of the *Arabian Method*, and the *truth* of what *they* ſay cannot be queſtioned by any that knows the *perſons*, and the *revolution* they brought about in *Europe:* and *hence* we may learn the reaſon of that difference which ſeems *frequently* to occur betwixt the *ancient diſeaſes* and *their critical motions* and *terminations*, and what we generally find: It ariſeth not from any ſuch *great change* in the *nature* and *types* of *maladies*, as ſome have *ignorantly* writ of late: nor as this *Bacon-face* talks, becauſe *we* reiterate moderate *Phlebotomy*: but becauſe we do not follow *at all* the *Method* of *Hippocrates* and *Galen* in the *curing* of diſeaſes: However we paſs for *Galeniſts* and *Hippocratical Phyſicians*, yet in truth *we are not ſuch*: our *practiſe* is made up *moſt* out of the *Arabian Method*, and *Medicaments*, and is a mixture of the *Grecian* and *Sarracenical Phyſick*, together with thoſe *acceſſionals* which improved *Chymiſtry* hath introduced: and ſince we *diſturb Nature* with our *vomits* and *minoratives* in the beginning.

P. *Caſtellus* de abuſu Phlebotom. p 6,7.

beginning, and neither *bleed, dyet* or otherwise Physick our Patients according to the *ancient prescriptions*, do *we* wonder to see another *face* and *issue* of *maladies* than was *heretofore*? Or, doth not he rather deserve to be wonder'd at, that should expect in so *different circumstances* for *resembling effects*? I believe our *Helmontian* with his *Emeto-cathartis*, and *exquisite Arcana* (so far transcending all the *shop-medicaments*, or received *Chymical* preparations) doth see as *few Crises* as any *Phlebotomist*: and may not I then retort upon *him*, that **he by his practise wholly disappoints a Crisis**? Nay, doth not he tell us, that in *his way*? **there will be no need to stand gaping for a crisis,** p. 101. **fith that may be anticipated, and all secured before that time, if there be a regular procession:** And may not the present *Galenists* justifie themselves in the *same manner*, since they can better warrant their *proces* and *Medicaments*; by a longer *succession of Experiments* happily made by *judicious* men, then this ignorant *Helmontian* Innovator?

Another Argument of his is this.

"If it be so that *striking a vein* often in a long *te-* p. 110.
"*dious disease*, is a preparatory for a *sharp Feaver*, as
"Doctor *Willis* and I both herein jump right in our
"observation: then am I certain that *Phlebotomy* re-
"peated in an *acute sickness*, is a door set open and an
"in-let for a *long infirmity*, so that this mode of defal-
"cating the vigour of the *Spirits* doth for the most
"part (as I have strictly heeded *many years*) disarm
"and plunder Nature in such sort that it cannot resist
"the Assaults of every petty infirmity, witness those
"multitudes who after sharp conflicts fall either into
"relapses, or Agues, Scorbute, Dropsies, Consumpti-
"ons, Atrophy, Jaundise, Asthmaes, *&c.* which might
"be easily prevented, if a mature regular course were
"taken

c taken to give convenient *Emeto-cathartics*, *Analep-*
c *tics*, *Diaphoretics*, which ſafely and ſpeedily cleanſe
c the Stomach, keep up the ſtrength and breath, that
we need not fear any miſchief from this late invention,
c Redundance of *Sulphur*, or Salt in the *blood*, no
c more than *choler*, *phlegm*, and *melancholy* in the An-
c cients.

cc The obſervation of Doctor *Willis* is this: *de febr.*
p. 108. c p. 75. *Præ cæteris vero obſervatione conſtat, quod*
c *crebra ſanguinis miſſio Homines febri aptiores reddat.*
c *i. e.* Now above all, it is certainly known according
c to obſervation, that often bleeding makes men more
c apt to fall into a Feaver: Again he follows it cloſe.
c *Hinc ſit ut qui crebro mittunt ſanguinem, non tantum*
c *in febres proclives ſint, verum etiam pingueſcere ſole-*
c *ant propter cruorem ſucco Sulphureo plus impregnatum:*
c *i. e.* Hence it comes to paſs, that they who often
c breath a vein, are not only prone to fall into Feavers,
c but alſo are wont to grow fat by reaſon the blood is
c full of Sulphur. In another place to this purpoſe he
c drives it home. *Qui ſanguinem habent ſole volati-*
c *liſato bene ſaturatum ij ſunt minus febribus obnoxii:*
c *hinc etiam qui ſæpius ſanguinem emittunt ad febres*
c *aptiores ſunt.* They whoſe *blood* abounds with *vola-*
c *tile Salt*, are not ſubject unto Feavers: for this cauſe,
c they that uſe *Phlebotomy* often are more liable to Fea-
c vers.

cc From hence——*G. T.* forms this Epilogiſme.
p. 109. c Well then the Doctor and I agree thus far in the
G. T. under- c main, that frequent bleeding procures Feavours;
ſtands not c which is ſufficient to back my Aſſertion, that Phlebo-
what a *proca-* c tomy is no good method of healing, ſith it is plainly
tarctick cauſe c a *procatarctick cauſe of Feavers.* For whatſoever
is: it is here c means exhauſting the ſtrength (as I can demonſtrate
a *cauſa* ϖεϱὶ c this courſe doth, more or leſs, ſenſibly or inſenſibly)
γϱαμμ. c inviting or making way for Feavers, inſtead of pre-
c venting of them, is not to be approved of or allowed

in

c in curing the *Scurvey* or other diſeaſes : unleſs we do
c act like *Tinkers*, ſome whereof are reported to amend
c *one hole* and make *another* : for how can it poſſibly
c conſiſt with the honour and credit of a Phyſician,
c *quem creavit Altiſſimus*, to go about to correct the
c blood by often letting it out in a Chronick diſeaſe,
c and likewiſe withall to uſher in, or as it were to be a
c *Pander* to the introduction of an *Acute feaver*, which
c in a ſhort ſpace diſſipates that ſtrength which this
c *Phlebotomical harbinger* hath in part worſted?

In *this* Argument there are ſo many *defaults* (which are obvious to be ſeen) that I muſt recommend again to theſe *Baconical* Philoſophers, a *Caution* I have more than once given them; which is to **omit in all their diſcourſes thoſe vexatious conjunctions, Cauſals and Illatives:** 'Tis meer *pedantry* for *them* to be tyed up by ſuch **particles**, the idle *foppery* of *Grammarians*, and *Logicians*, and *men of common ſenſe*. The *Reaſon*, if reduced to *form*, runs thus.

That which inclines unto a Feaver is not a proper remedy in a Feaver.
But frequent blood-letting inclines to Feavers.
Ergo.

The *Major* is falſe *every way*, whether it be ſuppoſed that *Phlebotomy* produce ſuch an effect *per ſe* and *directly* ; or by *accident*, and only in *ſome perſons*, in *ſome circumſtances*. For were it true that *Phlebotomy* did *directly* and *whereſoever it is uſed* introduce a *Feaver*, yet it may ſo happen that a *Feaver* may be *expedient* to ſome Patients for the *prevention of greater evils*, and ſometiems for the *curing of them* : and in *theſe caſes* 'tis as *much prudence* in a *Phyſician* to acquieſce in, or run the *fortuitous hazard* of a *leſſer* or *leſs dangerous evil*, as 'tis for *Stateſ-men* in the *Body politick*. Nature doth

 often

often cure *one diſeaſe* by introducing *another*: and commuting the *more dangerous* into another of *leſſer hazard*: as any *intelligent Phyſician* knows, who underſtands the *Metaptoſis* and *Metaſtaſis* of diſeaſes. I am not obliged to *read* to theſe Diſciples of my Lord *Bacon* a *courſe of Medicine*. There is an *Aphoriſme* of *Hippocrates* to this purpoſe. *Quia convulſione aut diſtentione nervorum tenetur, febre ſuperveniente liberatur.* Upon which words *Hieremias Thriverius* doth thus comment. *Alio modo febris convulſionem tollit ex plenitudine, alio rurſum modo diſtentionem: convulſionem enim curat, quia plenitudinem diſcutit; diſtentionem vero quia inſigniter univerſum corpus incalefacit: forte etiam diſtentio convulſionis genus neſcit. Quicquid autem ſit, utrique febris confert, ac potiſſimum diaria, imo & putrida minus periculi affert, quam ipſa diſtentio. Fruſtra ergo conſlictantur in ea queſtione Neoterici, an putridam febrem convenit excitare in convulſione ex plenitudine, aut flatulento tumore.* Which that it may be *lawfully* and *prudentially* done (but not by every *fool*) is a *judged caſe* amongſt us: and were it not *lawful*, the Argument would by a *parity* of reaſon extend to ſeveral *operations* in *Chirurgery*. It is the judgment of *Celſus* long ago, with which I conclude. *Sed eſt circumſpecti quoque hominis, & novare interdum, & augere morbum, & febres accendere; quia curationem, ubi id, quod eſt, non recipit, poteſt recipere id quod futurum eſt.*

Vide Steph. Roder. Caſtren: **Duæ ex quibus.** Valles. in Epidem. l. 4. p. 448. in hiſtoria *Alcippi.* & ibid. p. 401. in hiſt. *feminæ emptitiæ.* Hieremias Thriverius Brachelius in lib 4. Aphor. 57.

Valles. controverſ. Medic. l. 8. c. x. Hieron. Rubeus in C. Celſum. l. 5. ſect. 4.

C. Celſus de Medicina l. 3. c. 9.

The *Major* being thus *falſe* in that *ſenſe* which was moſt *pertinent* to his purpoſe: 'tis moſt *ridiculous* in the other: For who will not *immediately* laugh at him that ſhould *thus* determine? *That which may in ſome perſons, and in ſome circumſtances incline unto a Feaver,* **is never** *the proper remedy of a Feaver?* And how can this *Bacon-face* upbraid us *herewith*, who doth himſelf preſcribe to his Patients in Feavers *the moſt generous liquors of the ſubtileſt ſmack, exhibited largely,*

P. 169.

largely, without insisting upon the nicety of any danger from heating? and yet his *Sack* and other *generous liquors* may ingender *Feavers*, and *other distempers in the healthy*. In fine, Whoever *rejected the use of a thing for the abuse*, or condemned *peremptorily* any *cause* for *accidental inconveniencies following* thereon, but such a *Dulman* as this *Helmontian*, and his *brethren* the disciples of my Lord *Verulam*.

To the *Minor* I reply: that for the *observations* made by this *insipid pretender to Pyrotechny*, I regard them not at all: he hath not *judgment* enough to *make one*. *Ego vero sicuti experientiam multi facio, dummodo commodum expertorem nacta sit: Ita si unicuique qui se expertum dicat temere credidero, ridiculus profecto habear: ut qui & fori circulatores ac loquales vetulas, agrestes quoque sacerdotes in pretio habeam. Nam si quæras, omnes uno verbo, quæ proponunt se expertos dicunt.* It is true I have a great reverence for the name of *Experience*, and the bare *mention* thereof commands an *attention* from me: But it hath been the peculiar *misfortune* of my *education*, that I have been taught, not *rashly to assent: nor to believe every thing that is told me, since there is nothing but may be spoken by some body. I can be so* **civil**, *and so* **curious** *as to give the Relator an hearing, how mean soever he be, but before I credit him, I must consider* **whether the thing be possible**? *and withall (because my knowledge is not the adequate Measure of possibilities in nature)* **Whether it were done**? *If the thing did succeed, I inquire,* **whether it will constantly, or most commonly follow upon the like causes and circumstances**? Or **whether it is a rare accident**? *In the two first cases, the* **knowledge thereof** *makes a Physician the* **better Artist:** *the latter adds to his* **general Science** *of natural Phænomena, but not at all to* **his Art**, *except in cases* **as rare** *as the Phænomenon related.* In Artibus, inquit *Galenus*, duo sunt præ-

Novæ Acad. Florent. opusc. p. 21.

Ie. Riolan. in esp. ad dubia Anatomica *Barthol.* p. 75.

ceptorum genera, unum eorum quæ perpetuam habent veritatem: alterum, quæ utplurimum ita se habent, & tolerantur: quæ raro fiunt, ibi locum non habent. At hodie multi sibi placent in scribendis & obtrudendis observationibus raris, tanquam novis Artium mysteriis: sed rara non sunt Artis. *I do also consider the quality of the Relator: the vain-glorious and ambitious are easily deceived, because they passionately desire the thing should be so, and 'tis for the credit of such Observators, if it be so: the young are easily imposed upon by the little experience they have of things, the credulity that is in them naturally, and the good opinion or hopes they have of the integrity of others; and because they are conceited of their own knowledge (though the prospect of things be narrow) they are prone to opiniatrity, and vehement in their assertions, though too unsetled, and impatient, (as well as ignorant) to weigh any thing maturely and with all its requisites. I do not weigh the greatness and opulency of Relators, but value them as they are* Artists, *for such only can judge in their own Faculties: And when controversies arise the* Stagirite *deluded me into an opinion, that the most* probable *tenet was that which the* most, or the *most* intelligent *did profess.* This *Pyrotechnist* upon many reasons deserves not *any credit*: he writes Books as Mountebanks *paste up Bills*, to invite *custom*: the *Medicines* he recommends are such as by the *sale* thereof he would advantage himself: all he *publisheth* is in a subserviency to *this end*; and 'tis not his skill, but his ignorance that is concealed in his *Arcana*: all that ever sweet *William* or *Andrew* related upon a *Quack-salvers* stage deserves as much of *heed* and *esteem*, as what—— *G. Thompson* talks. I do not ask *thy pardon* Oh! most illiterate and dull disciple of my Lord *Verulam*, for dissenting from Thee. But I with *submission* and *deference* beg leave for not adhering to Doctor *Willis*: No man of *understanding* can condemn

Ar. Rhet. l. 2. c. 4. Εὐεξαπατητοί εἰσιν, ἐλπίζουσι γὰρ ῥᾳδίως—καὶ εὐπιστοι, διὰ τὸ μὴ πολλάκις ἐξαπατᾶσθαι.—οἱ καὶ εἰδέναι πάντα ὀιονται, καὶ διεχυρίζονται.

his

his practise : he hath not altered the *Authentick methods*, but given *new* and *plausible reasons* for an *Ancient procedure :* This Character is due unto *him*, that *scarce any man surpassed him in his thoughts, when* awake ; and 'tis his *peculiar* happiness, that his Dreams are *pleasant* and *coherent.* Amongst all that have written about *Phlebotomy*, and its *abuses*, I never met *with one* that recounted *this* for one *evil consequence* thereof, that it inclines men to Feavers : I find *P. Castellus* to reckon up *twenty five* evil accidents which sometimes ensue *thereupon*: but *this* is none of *them.* Nor do I see that it is reconcileable to *that effect* of Phlebotomy, whereby it refrigerates the *habit of the body*, and the *common distempers* which follow the *Abuse* of it, are cold : If it be *true* that it inclineth people *to be fat*, and *fat people* are neither so *hot*, nor incident to *Feavers*, as the *lean* and *bilious* (though otherwise more *weak*) there is reason why my doubts should increase upon me. It might, with some colour, have been said, that *excessive Phlebotomy* did dispose to the *Rheumatisme* and *Gout*; but not to *Feavers*; except *by accident*, that some *persons* having contracted a *grosser* and more *sanguine habit of body* upon *Phlebotomy*, and (*such complexions* being most capable of any *malignant* or *pestilential* and *contagious* infection, not by reason of their *phlebotomy*, but from the *habit of body*, which whether *natural* or *adventitious* is lyable to *those casualties*) falling upon any *excess* or other *occasional cause* into the Small-pox, or *Sanguine feavers*, the *observation* hath been raised into repute. It is a thing I have not seen to happen *vulgarly*: nor doth any *Author*, that I know, take much notice of that other effect, how Phlebotomy inclines to fat : I have read in *Joannes Fuchsius* a *Bavarian* that such a thing hath fallen *once*, or *so*, under *his observation*, in a Lady: and Doctor *Primrose* denies the matter of fact, that *Phlebotomy* will make those that are inclined to be fat, fatter :

Claudinus proposeth frequent Phlebotomy as a remedy for *fatness*. Venæ sectio omnino convenit; imo sunt, qui nihil magis ad detrahendam corporis molem valere existimant, quem crebram sectionem venæ. *Empiric. rational.* l. 1. §. 1, c. 4.

Io. Fuchsius Compend. abus. p. 2. c. 7.

Primros. de vulgi errors, l. 4. c. 50.

fatter: though persons that are *extenuated* and *emaciated* with sickness may by *bleeding* acquire a *greater corpulency*: And certain it is that in *those Countreys* where *Phlebotomy* is most used, there are fewest *fat men*, and *women*: as *Spain*, *France*, and *Italy*, or *Egypt*, in this *last region*, it is their *particular study*, and a *distinct profession*, to make people fat, but 'tis by other courses then *Phlebotomy*. In short, I my self have been let blood above *fourscore times*, and yet am lean: and so far from being *feavourishly* inclined, that I never had *any* except the *Measils* once, and *Small-pox* twice: and twice a *tertian Ague*: and I find no *imbecillity* or *prejudice* in the least that should induce me to repent what *I have done*, or resolve against it for the future: But we must distinguish upon what is produced *by any thing* as its *cause*, and what is only a *concomitant* thereof: If it *ten thousand times* proves *otherwise*, we must not impute the *growing fat* of one Patient to *Phlebotomy* indefinitely, but rather to some *alteration* the *disease* (in which it was applyed) hath wrought in *his body*, to his *Analeptic diet*, and course of life, *subsequent* thereunto; or to his *individual temper*. And perhaps it may be not *impertinent* to add here, that as *Distillation* and the *burning of the blood* of a *Multitude of persons* hath convinced me that there is no such *deflagration of blood*, as that learned *Physician* imagines, nor any *vital fermentation* in the *blood* depending upon the *Chymical* ingredients of *Salt*, *Sulphur*, and *Spirit*, *&c.* so neither is the *Blood* of *corpulent persons* (I never tryed the *Obese*; because they do not bear *Phlebotomy*; except once in a *Youth* lately that was *extream fat*, and in danger of an *Apoplexy*, and it did not *burn* with so vigorous and lasting a *flame* as that of many *lean* men, but by its *crackling* gave testimonies of much *Salt*: yet the *Serum* was *insipid*) it is not properly *sanguine*, but *pituitous*.

Prosper Alpinus de med. Egyptiorum, l. 3. c. 15, 16.

But

But to resume the discourse: I expected to have seen the *Minor* proved by our *Helmontian*; but although I find that he saith *his observation did jump with that of Doctor Willis*, that Phlebotomy did incline to Feavers: Yet my *Reader* may see that in the *first part of the Argument*, as I have urged it in *his own words*, he reckons amongst the *evil consequences* of bleeding none that proceed from an *opulent* and *sulphureous blood* transcending the *dominion* of the *spirit* that remains after *Phlebotomy*, but such as argue an *impoverishing of the blood*, or a *cold indisposition*. I will repeat it again, to shew how *justly* I censure his *Logick*, and so dismiss the *Argument*.

If it be so, that striking a vein often in a long and tedious disease, is a preparatory for a sharp Feaver, as we both herein jump right in our observation: *then am I certain that Phlebotomy repeated in an acute Sickness, is a door set open, and an in-let for a long infirmity, so that this mode of defalcating the vigour of the spirits doth for the most part (as I have* strictly heeded *many years) disarm and plunder Nature in such sort that it cannot resist the assaults of every petty infirmity, witness those multitudes of relapses, or Agues, Scorbute, Dropsies, Consumptions, Atrophy, Jaundise, Asthmaes,* &c.

The proof of the *Minor* here is not only defective: but the *mischief* is, that Doctor *Willis*, who *judiciously* useth *Phlebotomy*, commends *it* in *Feavers* both in the *beginning* and *augment* of those that are *putrid*, (and also in *Diaries*) as the *principal* remedy (*inprimis conducit*). Dr. *Willis* de febr. p. 197.

Dr. *Willis* de febr. p. 166. edit. 1662.

conducit) and ſpeaks in the place cited by our *Helmontian* only of a *cuſtomary letting blood in time of health*: Whereas this *Bacon-faced* Pyrotechniſt, ſaith that their Wits jump in this, that *often ſtriking a vein in a long and tedious diſeaſe is a preparatory for a ſharp Feaver*: Let any man read *the place* and ſee how he abuſeth that *excellent Practitioner*, whoſe words are, *Præ cæteris vero obſervatione conſtat* quod crebra *ſanguinis miſſio homines febri aptiores reddat, quare dicitur vulgo, quibus ſanguis ſemel detrahitur, eos, niſi quotannis idem faciant, in febrem proclives eſſe.* I am ſorry *he* ſhould ſeem to give a *reaſon* for a *vulgar error*: for *once* or *twice* bleeding doth no more create a *Cuſtom*, or diſpoſe *Nature* to an *anniverſary commotion* in the *blood*, than *one Swallow makes a Summer*: But certain it is, (I ſpeak of our *cold Climates*, not of thoſe *hotter* where *ſweat* and *tranſpiration* often prevent thoſe *determinate motions* of nature) that ſuch *here* as are *very much* accuſtomed to bleeding, keep *certain times* for it, their bodies will require it *at that time*, and, *if they refrain it*, they will feel an *oppreſſion* and *dulneſs*, or *laſſitude*, and *may* fall into a *Feaver*, but *Aches*, *Rheumatiſme*, *Gout* are more likely, except other *accidents* concur to produce a *Feaver*: if the *ebullition* be no greater than to produce a *Laſſitude*, 'tis poſſible (in *ſome bodies*) that the *Scurvy*, *Cacochymy*, *Cachexy*, *Dropſie*, *Aſthmaes*, *Cephalalgyes* may enſue: for the *morbifique ferment*, like the *ſcum boyled into the* broth; may mix *inſeparably* with the *blood*, and vitiate *for ever* that *great ſanguifier* with an *unexpreſſible pravity*: But he that thinks *'twill be ſo in diſeaſes*, when the Patient is *phlebotomiſed*, neither underſtands the *motions of nature*, nor the *effects* of a *ſound recovery*. Inſtead of Doctor *Willis* this illiterate *Baconiſt* (who profeſſeth to be ſo well verſed in the way called *Galenical*) ſhould have (as *he argues*) made his recourſe to *Avicen* and *his followers*, who are (*in many caſes*)

fearful

fearful of *Phlebotomy*, leaſt it ſhould produce an *ebullition yf choler*, or *crudity*: which *two inconveniencies* may produce all that—*G. T.* talks of. Thus ſometimes *Tertians* have been *doubled*, nay turned into irrecoverable *continual Feavers*. But all the *caſes* relating thereunto concern not an *intelligent Phyſician*, who underſtands what is *paſt*, *preſent* and *to come*, and knows *when to preſume*, *when to fear*. But I intend not *to teach* theſe *fellows*: it were better for the *Nation*, and *them* too, that they were *Coblers*, or *day-labourers*, than *Practitioners* in *Phyſick*: a *Doctoral Diploma*, though purchaſed, will not ſufficiently qualifie *them* for the *profeſſion*; and as little doth the title of *Experimental Philoſophers*, and *Verulamians*, avail *them*.

Hor. Augen. de miſſ. ſangu, l. 4. c. 19.

The next Argument of his that I come unto, and which is more than *once* inculcated, as if he thought it a *Demonſtration*, is this, as I may *form* it.

'' If it be not *fitting*, nor *uſeful* to bleed in the
' *Peſt*, which is a *Feaver* κατ' ἐξοχήν, it is not *fitting*, nor
' *uſeful* to bleed in any *ill-conditioned* Feaver whatſo-
' ever.

'' But it is not *fitting*, nor *uſeful* to bleed in the
' *Peſt*. Ergo.

'' The *Conſequence* of the *Major* is thus proved.
' It is no leſs *criminal* to ſuffer the *Blood* to ſpin out in p. 82.
' any *ill-conditioned Feaver* whatſoever, then in that
' which is ſo κατ' ἐξοχήν. And, Albeit our *Phlebotomiſts* p. 99.
' do extenuate the matter, ſetting a fair gloſs upon it,
' pretending that in *malignant Feavers* of the inferiour
' claſt, *Plethorick* or *Cacochymical* indications do ma-
' nifeſtly require their *utmoſt aſſiſtance* before that *in-*
' *conſiderable venome* lying *occult*: I muſt, by their fa-
' vour, be *bold* to tell *them* they will never *ſolidly* and

' *ſpeedily*

'*ſpeedily* make a ſanation of any great *Feaver*, or any
'other diſeaſe, till they handle it in *ſome manner* like
'the Plague: for there is *quiddam deleterium*, a cer-
'tain *veneno ſity* in *moſt maladies*; as I can prove *ex*
'*facto*.

P. 81. '' The *Minor* is thus proved. For whoſoever at
'any time, upon what pretence ſoever of caution,
'attempts *Phlebotomy* for the *cure* of the *Plague*, takes
'a courſe raſhly to *jugulate* the Patient, unleſs ſome
'extraordinary redemption happen. Certainly here
'Doctor *Willis* (who allows to perſons *accuſtomed to*
'*bleeding*, and in *plethorick bodies*, the humours being
'very *turgent*, though *ſeldome*, and with great *caution*,
'to *bleed*) ſpeaks *by rote*, for had he *Anatomiſed the*
'*Peſt*, inveſtigated the nature of that *atrocious ſtroke*,
'as I have, feeling the ſmart of it *three ſeveral times*,
'he would as ſoon allow of piercing a vein in him
'who hath taken an intoxicated draught, as at *any time*
'in this caſe, where the *Stomach alone* is the place
'from *whence* the *poyſon* is to be exulated. 'Tis no
'wonder if the *Galeniſts* ſtrait injoyn *bleeding*, where
'they find a *ſeeming foulneſs* in the *leſs malignant Fea-*
'*vers*, when they dare be tampering *with it* in the
'*greateſt*.—The only noted Sluce through which
P. 89. 'the *poyſonous matter* of *all malignant Feavers* paſſes
'away, is the univerſal Membrane, *the Skin*, on which
'the *Stomach* hath no ſmall influence, governing this
'*Catholick coat* at its *pleaſure*, in ſo much that no ſuc-
'ceſsful *ſweat* or eruption can be expected as long as
'the *Duumvirate* lies proſtrate under any inſulting
'calamity. Wherefore the Arch-deſign of the *Phyſi-*
'*cian* is to cheriſh, corroborate, and remove *all impedi-*
'*ments* of this eminent part, that it may protrude, ex-
'plode, or ejaculate from its boſome to the utmoſt li-
'mits, whatſoever is *virulent*, cloſely ſupplanting the
'*fortreſs of life*. Now whether bleeding be any com-
'petent *Medium* to atchieve *this*, let any one indiffe-
'rently

'rently verſed in the knowledge of the *Peſt* be Judge,
'wherein no honeſt able *Artiſt* dare open a vein, be-
'cauſe it will attract the *Miaſme* inwardly, hindring
'the *extrinſecall* motion of the *Archæus*, for the expul-
'ſion of what is *mortiferous*.

Before I come to anſwer *particularly* to the *Argu-ment*, give me leave to animadvert upon ſome paſſages in this diſcourſe. As to the *Duumvirate*, I do not underſtand whether he be abſolutely of *Helmont*'s mind, or no, making the *Pylorus* of the *Stomach* to be the place where the *Soul* is *radically* ſeated, and whence it diſplayes it ſelf principally in the management of the *Oeconomy* of the *body*; joyning the *Spleen* with the *Stomach* as an Aſſociate in that *Soveraignty*. There is not any thing more fooliſh than the *dreams* of *Helmont*; had our *Baconiſt* any underſtanding of *humane nature*, any converſe with *modern Writers*, the vanity of the *Duumvirate* would have been manifeſt unto him: I adviſe him to read the *Fundamenta Medica* of the excellent *Mæbius*, where he treats of the *Stomach* and *Spleen*: where he alledgeth nothing for himſelf, why ſhould I inſiſt on any thing. The general *Archæus* of the *Stomach* and that *appropriate to each part* ſeem to me to import no more, nor to be *more intelligible* than the *innate heat of each part*, and *that other influencing each part* and *diſſeminated from the Heart*: If the *innate heat of each part* be called a *particular ferment*, it matters not much: I comprehend it as little ſtill: How the *operations of Nature* are performed I *know* not, nor ever ſhall underſtand by *Canting terms*, or *Similitudes*: That the notion of *Fermentation* is *equivocal*, or not to be accommodated to the Stomach and its *digeſtion*, but by a certain *Animal heat*, I think *Mæbius* hath evinced: and I cannot be ſatisfied with the reply of *Kergerus*: and if the notion of an *implanted ferment* and *fermentation* be *ſuſpicious* there, where there

Mæbius fundam. med. *de uſu ventriculi*, p.178.
Kerger. de fer met. §. 3. c. 2.

is the *moſt* to be alledged for *it*, I may be pardoned for ſcrupling to fix *it* elſewhere; but to be content thus to manage the *Queſtion*, as if it were branched into theſe *Interrogatories*.

Whether the *Peſt* be a *Feaver* κατ' ἐξοχήν?

Whether in the *Peſt* it be *lawful* and *beneficial* to let *blood*?

Whether all ill-conditioned great *Feavers*, and *moſt maladies* have in them a *particular* venome, *deleterium quiddam*, and are to be cured by *Corroboratives*, and *Diaphoreticks*, without *Phlebotomy*?

The diſtinct ſolution of theſe *Queſtions* will make the anſwer to his *Argument* very facile: and I will not retrench upon the not-to-be-perceived *Empire* of the *Duumvirate*, nor inquire by *what means* the *ſtomach* hath ſuch an influence upon the *Skin* as to govern it as it pleaſeth.

The *firſt Queſtion* if I were to determine it out of —*G. T.* in his Treatiſe of the *Peſt*, I would reſolve in the *Negative* upon this reaſon. *If the* Peſt *be a Feaver* κατ' ἐξοχήν, *then is a* Feaver *inſeparable from it, and that* term *ought to be put into its* Definition. *But*— G. T. *doth not* define *the Peſt by a* Feaver, *and grants that the Peſt in ſome produceth* no Feaver at all. Ergo——

G. T. of the Peſt: c. 1. p. 8.

His definition of the *Peſt* is this. *The Peſt is a contagious diſeaſe, for the moſt part very acute, riſing from a certain peculiar venemous Gas, or ſubtile poyſon, generated within, or entering into us from without: at the acceſs or bare apprehenſion of which, the Archæus is put into a terrour, and forthwith ſubmitting to the aforeſaid poyſon, inveſts it with its own ſubſtance, delineating therein the perfect Idæa or image of this ſpecial kind of ſickneſs diſtinct from any other.* He that can accommodate this *Definition* to a *Feaver*, or find any thing of a

Feaver

Feaver in it more than of the *Colick*, or *Dyſentery*, *Diarrhœa*, underſtands more than I; for even theſe have been *Contagious*, as well as *Epidemical*: Perhaps he will reply, that the *Peſt* is *alwayes ſo*: But in *this*, notwithſtanding his boaſting here he underſtands the *Peſt*, and (whereas *Rondeletius* and other *Galeniſts* diſſected many that died of the *Plague*) he did anatomiſe one that deceaſed of *it*, yet doth he not know the *Nature of it*: For the *Peſt* is not *alwayes* contagious, there being recorded many caſes in which the *Peſt* hath ſeiſed *one perſon*, and extended no further. However if the words Contagious diſeaſe do not include a Feaver κατ' ἐξοχὴν, there is not any mentioned in the Definition: and if they do, then is alſo the *Scabbado*, and *Leproſie*, &c. a Feaver κατ' ἐξοχὴν, ſince each of theſe is a *Contagious diſeaſe*. In ſum, He grants that the *Peſt* may invade without a Feaver, in theſe words.——*It produces a manifeſt Feaver in this man*, and in that none at all, *or hardly any ſenſible*.——Theſe words do not become a man that *Holds the Peſt to be a Feaver* κατ' ἐξοχὴν, and carries on the *Hypotheſis* ſo far as to make all *malignant*, *putrid*, *Feavers* to participate thereof, and bear ſome *reſemblance* thereof: and (which is *pretty*) that *almoſt all maladies* (either *Feavers*, or not) fall under the *ſame predicament*.

Isbrand. a Diemerbrook de peſt. l. 1. c. 7. §. 1. p. 18. edit. 1665. *Amſterdami.* & *Zacchias* Qu. medico legal. l. 3. tit. 3. Qu. 1. §. 13, 14. G. T. of the *Peſt*. c. 3. p. 42.

Isbr. a Diemerbr. de Peſte l. 1. c. xii.

But I paſs from——*G. T.* to inquire into the true nature of the *Peſt* according to the moſt *learned* and *judicious Practitioners* that ever attended *in it*. The moſt accurate *Isbrandus a Diemerbrook* relates how many in the *Peſt* at *Mymmegen* (where he was *Viſitant*) had the *Peſt* without any ſigns of a *Feaver*: nor was this to be ſeen only in ſuch as dyed *ſuddenly*, but in thoſe that had *Botches* and *Carbuncles*, yet went *up and down* and purſued *their buſineſs*, without being *any way* feaveriſh: of which number *himſelf* was one. And he with the allegations of many *Authors* and Hiſtories of

So *Van der Mye* during the ſiege of *Breda*, relates cauſes of ſuch as had the *Plague*, and yet during the whole time of their Sickneſs had *no Feaver*. Van der Mye de morbis Bred p. 11, 12.

of *Plagues* justifies his *Definition*, in which he forbears to make the *Peſt* to be a *Feaver*. In like manner *Caſper Hofman* living in *Norimberg*, when the Town was beſieged and the *Plague* raging, had the *Peſt* himſelf with a *Carbuncle* on his ſhoulder, *ſed ſine alio ſymptomate*, and taking due care of himſelf, without confining himſelf to his *bed* or *chamber*, he recovered: He inſtances in others that eſcaped, *in the ſame condition*. With theſe agreeth *Nardius*, who was *chief Director* in the *Plague* at *Florence* in 1630. And the moſt learned *Maſſarias* who was Phyſician at *Vicenza* when the *Plague* reigned there in 1577. Out of all which it is manifeſt that the *Peſt* is not a *Feaver* κατ' ἐξοχήν, ſince there may be a *Peſt* in which the *ſick party* hath not any *Symptome* of a *Feaver*: 'Tis true that many learned men do define the *Peſt* by a *Feaver*, and do hold that there is no *Plague* without *one*; but ſince *they* confeſs that *ſometimes* neither *Pulſe*, nor *Urine*, or any *Symptome* diſcover the leaſt *characteriſme* of a *Feaver*, 'tis againſt common ſenſe to aſſert what they do in *ſuch caſes*. It is granted that uſually the *Peſt* is accompanied with a *putrid malignant Feaver* of a very uncertain *Type*; which ſometimes appears not before the *Botch* and its *ſuppuration*, ſometimes it begins with the *firſt attacque* of the *venome*. If what I have ſaid be *true*, and that the *Peſt* may be without *any ſign* of a *Feaver*, or any *ſenſible* indiſpoſition, I much doubt the *reality* of *his opinion* who talks ſo much of the affrighted *Archæus*, and the *troubles* which *eſſentially* and *inſeparably* befal the *Duumvirate* of the *Stomach* and *Spleen* upon this *invaſion* or *inſurrection* of the *peſtilent venome*: and I am more confirmed in my *jealouſie*, becauſe I have read that ſome of them that have had the *Plague*, have not felt any *ſymptome*

C. Hofmann. Antifernelius Lemm. 64.

I. Nardius in *Lucret.* l. 6. p. 527.

Alex. Maſſar. de peſt. l. 1. (inter opera) p. 498. & *Forreſt.* de febr. l. 6. obſ. x. *Sennert.* de febr. l. 4. c. 1. Dudith. inter apiſt. Schoet. ep. 52.

Fateor febrem hanc pro putredinis aut diffluationis conditione, copia aut incremento, modo majorem, modo minorem exiſtere, quam in nonnullis Synochum, Tertianam continuam, & Febrem quemcunque ardentem incendio & calore æquaſſe, non ego tantum, ſed & Collegæ mei, Doctores hujus urbis Medici clariſſimi, ægris in publico Noſocomio decumbentibus operam præſtantes obſervarunt. *Minderer.* de peſtilentia. c. 6.

ſymptome about their Stomach, not ſo much as a *debility of appetite*, but ſometimes they have complained *firſt* of their heads *being diſcompoſed*, and moſt commonly of anxieties about their heart. But 'tis not my intention to write a Treatiſe of the Plague: 'tis a *diſeaſe* I never *ſaw*, though at *Fulham-peſt houſe* and at *Windſor* I gave ſuch *Preſcripts* and *Medicines* in the beginning of the *Plague* as did equal *in effect* any of the *Arcana* of this *Helmontian*. As for the *knowledge* this *talkative perſon* ſhould acquire by *diſſecting one body*, it is but little; it argues want of reaſon in *him* to conclude generally from *one caſe*: the *Glory* of the *Act* is much abated in this, that *Bontius*, and *Rondeletius* in the preſence of many Students diſſected *ſeveral*; and (which is more) this *laſt* denies the *Carcaſſes* of ſuch as dye of the *Plague* are not *infectious*; ſo doth *Fracaſtorius*, *Jordanus*, *Gregorius Horſtius*: I allow that this laſt is not a *conſtant truth*, and that there are ſome *Obſervations recorded* by which it appears that the *Carcaſſes of ſuch as dyed of the Peſt* (before putrefaction) have been *infectious*. But to ſhew with how much *injuſtice* he triumphs over the *Galeniſts* for his having diſſected one *ſingle body*, I ſhall let the World ſee that the *Galeniſts* (without proclaiming the *fact*, or cauſing a *Picture* of it to be cut) have done as much, and that the *variety* of *Peſts*, and the *different effects they produce in bodies* is demonſtrable. At *Palermo* in *Sicily* in 1647. there was a *Plague*, in which upon the diſſection of *many bodies* by a ſort of fellows, all whoſe knowledge did not enable them to cure a cut-finger, whoſe skill is but words, and advances nothing: theſe *Galeniſts* did Anatomiſe them. *Hæc viſa: vaſa omnia venæ cavæ ſanguine ita nigro, aduſto, atrabilari, turgida ac repleta, ut fuſi atramenti ſimilitudinem præ ſe ferret. Idem ſanguis tum in corde, tum in faucibus repertus fuit, pulmones atque hepar tumefacti, inflammati, ventriculus bile turgi-*

dus,

Sennert. de febr. l. 4 c 1. de peſtilent. *Paræus* de Peſt l. 1. c. xii.

Rondeletius de febr. de febre peſtilentiali.

Volcherus Coiſter diſſected many in the Hungarian *Peſtilential* feaver: ſo did *Ieſſenius*, and *Rulandus*.

Joſeph. Manſcuſus pro ſec. cub. vena def. p. 153, 154.

dus, nulla in venis Meseraicis, nulla in inteſtinis læſio. Eadem hæc uniformiter in ſingulis fuerunt obſervata. If it be ſaid, that 'twas *no great* attempt; becauſe it was no very *mortal Peſt*; yet this is certain, that it *lay in the maſs of blood*, and that the *Duumvirate* was not ſo much concerned, as *G. T.* could have wiſhed; nor the *blood* in the *vena porta* altered according to Circulation: Well: that laſt at *Naples* I am *ſure* was as *pernicious* as ours at *London*; and there the *College* of *Phyſicians* cauſed many to be diſſected: I have not met with the *Programme* publiſhed by *them*, but the *Duumvirate* gains nothing by what I do read.

Carol. Valeſius de Bourgdieu de peſt. p. 239.

Nam diſſecta cadavera, hepar, pulmonem, inteſtina, nigris maculis interſtincta, cor vero atro ſanguine concreto luridum præbuere, ut Medici Senatus Neapolitani programmata die ſecunda Junii edita promulgarunt. Neither doth it appear that what this *Pyrotechniſt* ſaw in the body, after the man was deceaſed, was either the cauſe or ſeat of his diſtemper when he firſt fell ſick: the laſt *ſtrugglings* for life might expreſs many *liquors* into the ſtomach, and vitals, and they upon their *commixture, ſetling*, and *refrigeſcence* create, other *Phænomena* than were meerly the effects of the *Peſt*. 'Tis averred by *C. Celſus*, *Neque quicquam eſt ſtultius, quam quale quid vivo homine eſt, tale exiſtimare eſſe moriente, imo mortuo.*

C. Celſus medicina l. 1. pref.

That I may the better decide the *ſubſequent controverſies*, it will be requiſite I repreſent a more *exact Definition* of the *Plague*; and to do that well, I muſt diſtinguiſh upon the word Peſt, which is either taken in a *general ſenſe*, and ſo comprehends any Epidemical contagious diſeaſe of which many in the ſame Country do dye, *be it attended with a Feaver, or deſtitute of one, be it occaſioned by any ſpecifick malignity, or anomaly of the Air, or ariſe from evil diet, or imported by contagion.* Thus the *Epidemical contagious* and *pernicious Colick* recorded in *Ægineta*, was a *Peſt*:

Coyttarus de purpura c. 7. p. 54.
Meſſarius de peſt. l. 1. (inter opera) p. 497.

Peſt : thus *Squinancies*, *Catarrhs*, *Pleuriſies*, *Peripneumonies*, *Diarrhœas*, *Dyſenteries*, the *Meaſils*, *Small-pox*, have been *peſtilential:* nay the *Garrotillo* or *Strangulatory diſeaſe* in *Spain*, *Sicily* and *Naples*, though it ſeized upon and infected ſcarcely any but *Children*, was a *Peſt*, and eſteemed ſo by *Aetius Cletus* and others. Thus it was deemed at *Venice* to be a *Peſt* of which ſo many once *died*, though there were not any other *Symptomes* perceivable in *it*, but a *tumor of the teſticles* accompanied with *ſudden death*. *Legi ſuperioribus menſibus libellum Veneti cujuſdam, qui experientiam teſtem citat, multos ex peſte mortuos eſſe, quibus teſticuli intumeſcebant ſolum, nullo præterea ſymptomate ægrotos illos invadente.* It matters not what is the ἀπόσκηψις of the diſeaſe, which way the *venenate* matter *inclines*, or what part it *principally* affects; a *Carbuncle* in the *throat* (as in the *Garrotillo*) is as *peſtilential* as a *Carbuncle* on the *hand*, or *toe*, if it be as *epidemical*, *contagious*, and *mortal*. So the *Chin-cough* may be *peſtilential* upon the like *qualifications*: and I believe *that* to be the *diſeaſe* whereof *Ballonius* ſpeaks, that it was *Epidemical* amongſt the Children in *France* in 1579. He calls it *Tuſſis Quinta*, and admires how it came by *that name*, and ſo doth his Scholiaſt Mr. *Thevart:* undoubtedly it was tranſmitted from *England*, and thence came that name, which the *French* miſtook for *Tuſſis Quinta*, and *Quintana*: that is the diſeaſe I am ſure he deſcribes: he ſaith *none ever writ of it*: and I believe it to be true as to *forreign Phyſicians*. Such miſtakes will *hereafter* make work for *Criticks*; who will make ſtrange *gloſſes* hereupon, as on the *Milordus* of *H. ab Heere*, and the *Cereviſia Trihopenina* in *Mercatus*; the firſt imports no more by *unus ex iis quos Angli Milordus vocant*, then *one whom the Engliſh call* My Lord; and the other intends nothing by *Cereviſia Trihopenina* than *Three-half-penny Ale*, and contradiſtinguiſheth from *Cereviſia dupla*, or *double Beer*. But

Bapt. *Codronchius* de morb. vulgaribus, c. 3.
Io. Crato aſſert. de febr. peſt. p. 13.
Aetius Cletus de morbo Strangulator. c 2.
Mercatus, Conſult. med. 14.
Duditbius inter Epiſt. *Scholizhii*, Ep. 51.
Ballonius Ephemer. l. 2. p. 237.
Mercat. de recto med. præſid. uſu. l. 1 c. 2.

to resume my discourse; I add that in such times as there are diseases of *sundry types*, and *several symptomes*, so as that they may seem to be *different* and *sporadical diseases* only, yet in case they be *malignant*, *vulgar*, *pernicious*, they are to be accounted either as *so many Pests*, or as *one*, under *several disguises*: for it is not alwayes true that in the time of the Pest all other diseases *cease*, as is evident out of *Hippocrates*: Thus *Pestilential Peripneumonies*, *Squinancies*, and *Pleurisies* did at the same time rage in *Germany*, (as *Wierus* relates) near the *Rhine* in 1564. And during the Siege of *Breda* amongst the Garrison at the same time, besides the *vulgar Plague* many *pestilential* diseases, as *Tenesmes*, *Dysenteries*, *Cephalalgies*, and *Catarrhs*, which retaining their *distinct types*, were withall *pestilential*: nor is it strange that I should reckon upon *all these* as radically one disease; for in the vulgar *pest*, such was that at *Athens*, there are reckoned up as one Pestilence a *multitude of diseases* that, were it not for that *common mixture* of a *pestilential venome*, must have been reduced to *several heads*. Thus in the *spotted Feaver* at *Lubec* did *Neucrantzius* observe that almost *all manner of diseases* were the effects of that Pest: "*Purpuræ venenata qualitas intro con-*
"*cepta, ut tota specie nobis adversa, ita ad morbos totius*
"*substantiæ merito refertur. Quamvis enim ultro con-*
"*cedam nullum fere morborum aut symptomatum genus*
"*dari, quod non in purpura sese offerat: isti tamen*
"*morbi consuetis non cedent remediis: & in singulis*
"*morbis ac symptomatibus peculiare atque abditum quid*
"*apparebit, quod experto & prudenti Medico supra sor-*
"*tem istorum, sed simplicium, morborum esse, imo a cæ-*
"*teris similibus totius substantiæ morbis se vindicare,*
"*totoque genere inimicam illam qualitatem, in qua essen-*
"*tialis morbi hujus proprietas posita est, manifesto decla-*
"*rare videatur. Sic lues venerea nulli non morborum*
"*conjungitur, qui tamen non illis consuetis remediis, sed*
alexiteriis

Hippocrates Epidem. l. 3. cum notis *Vallesii*. p. 279, 280, 281.

Wierus Obs. l. 1. de epidem. pleurit. &c.

Vander Mye de morbis *Bredanis*, p. 4, 5.

Alex. Massar. de pest. l. 1. inter opera. p. 510, 511.

Neucrantzius de purpura, p. 65.

c *alexiteriis junctis se curari postulant, adeo ut plerum-*
c *que fallant non solum ægrotantes, sed ipsos etiam me-*
c *dicos, docente* Fabio Paulino lib. 1. comment in pestem
c Atticam Thucydidis, p. m. 37. *Idem in Scorbuto*
c *Arctois locis medicinam facientes experimur, qui cui-*
c *libet morborum & symptomatum conjungi solet, ut*
c *nullis in reliquo corpore sceletyrbes indiciis morbi qua-*
c *litas uni membro impressa aliquando hæreat, medicos*
c *non raro ludat, curationemque moretur.*

Under the aforesaid *Definition* of Pests I include all those that are called Pestilential feavers, such as the *Sweating sickness*, *Hungarian* and *Spotted feaver*, the *Hectick* and *semitertian pest*, of which you may read in *Schenckius*: for by the doctrine *de Conjugatis*, a Pestilent Feaver is a Feaver that hath the Pest. This is not meerly a *Logical Quirk*; several *Practitioners* averre it: and particularly *Mindererus*: whose words in opposition to such as distinguish betwixt a *pestilential Feaver* and the *Pest*, are these.

Schenckius Obs. Medic. l. 6.

Reymond. Minderer. de pest. c. 6.

c c *Febris pestilens (ut illorum distinctione utar) aut*
c *vera est, aut non vera; si vera est, nil aliud est nisi*
c *Pestis ipsissima, & ut doctissimus Hieron: Mercurialis*
c *loquitur a vera peste inseperabilis: si non vera, jam*
c *nihil vel parum commercii cum peste habebit, & sic pe-*
c *stilens non erit, nisi ob similitudinem aliquam sympto-*
c *matum (quod forsan Galenus voluit) ita eam appel-*
c *lare placeat, & sic inter malignas annumerabitur:*
c *quod si gradum intenderit & vere pestilens effecta fue-*
c *rit, nil nisi pestis erit: alioquin simile esset dicere hic*
c *Saxo est aut Suevus, ergo non Germanus: aut hic He-*
c *truscus est ergo non Italus. Unde febres malignas* ομωνύμως
c *& æquivoce pestilentes quandoq; dici observandum.* i.e.

A *pestilent Feaver* (to use their distinction) is either *really such*, or it is *not so*: if it be *really such*, then it can be nothing but the *Pest* it self, and as the learned *Mercurialis* observes, no more distinct *therefrom* than it is from *it self*: if it be not such *really*, then it is not to be ac-

counted *peſtilential*, except you pleaſe to *nick-name* it *ſo* by reaſon of ſome *reſembling ſymptomes* (which it may be was the ſenſe of *Galen*) whereas it ought to be reputed only *malignant*, above which *degree* if it riſe and become truly *peſtilential*, 'tis nothing elſe than the *Peſt*: And to ſay *otherwiſe* is as abſurd as to argue, this is a *York-ſhire* or a *Devon-ſhire* man, therefore no *Engliſh-man*. From whence it is evident that *Feavers* purely *malignant* are but equivocally ſtiled *peſtilential*: and all that are *peſtilential* are ſorts of Peſts. Thus when *Peſtilential Pleuriſies*, *Squinancies*, *Cholerick paſſions*, *Lethargyes*, *Eryſipelas*'s do rage, they looſe their uſual *denomination*, and become ſo many *Peſts* (or the ſame) attended with a *Pleuriſie*, *Squinancy*, *Cholerick paſſion*, *Lethargy*, or *Eryſipelas*, *&c.* And then thoſe otherwiſe *formal* diſeaſes become but *ſymptomes*, and *accidental conſequences* of the *Peſt* which vary not the *eſſence* thereof. Nor is it neceſſary to the truth of the *Definition*, that all *theſe Peſts* ſhould be *actually* Epidemical, or *afflict all ſorts of men*; or be *alwayes equally mortal*: for the *ſpotted Feaver* is as much *included* here, though it extend no further than *one ſingle perſon*, and ſo is a *peſtilential Catarrh*, or *Cough*, as our *Phyſicians* include the *Plague* (commonly ſo called) under *Epidemical* diſeaſes, though ſometimes it extends not its *contagion* beyond *one family*, or deſtroy but one *perſon*. It hath happened that a *Peſtilential Peripneumony* accompanied with *ſpitting of blood* was more fatal than any vulgar *Plague* ever heard of: ſuch was that in 1348. written of by *Guido de Cauliaco* (who lived then) it poſted from the *Eaſt* to the *Weſt*, and ſcarcely left ſurviving then the *tenth part of mankind*, if ſo much. And the *Spotted Feaver* hath *ſometimes* been more *pernicious* than the *Plague* in *France*: Again, I muſt ſay that *ſometimes* even theſe Peſts may not be *pernicious* or *mortal*: Such was that *Peſtilent Epidemical Cough* in 1580.

Id. ibid. *Neucran ziu* de purpura c.x. p.150.

Neucrantz. de purpura, c. 3. p. 35

Isbr. a Diembrook de Peſt. l 1.c.1.§.3.& c.2. ſect 3.

Minderer. de peſt. c. 6.

Schenckius Obſ. med. l.6.

Cozttarus de febr.purp.c.5.

1580. which over-ran all *Europe*, yet, as sick as men were, *there dyed not one of a thousand*: yet doth not this derogate from *my opinion*, since not only those that write of *it* do allow it to have been *pestilential*; but even in the vulgar Plague, where it is expected most should dye, at *Millaine* in 1576. and 1577. *Septalius*, who was *Physician* in it, records it, that many more survived than died at that Visitation: yet, says he, would I have no body to deny it the title of a Plague, for it had all other signs of the Plague.

Wierus Obs. l. 2 de pestilenti & Epidemica tussi: & *Forestus* Obs. l. 6. obs. 3.
Io. Sporischius de febr. Epid. c. 4. p. 128.
Vallenola in append. ad loc. commun. c. 2.
Septal. de Pest. l. 1. c. 14. p. 23.

There is a great *discrepancy* betwixt the *violence* and *symptomes* of the same *pestilential disease* in its beginning, progress and end; betwixt such a *disease* (to *appearance* the same) when it rages at *one time* and at *another*, in one season of the *year* and in *another*; upon *some sorts* of men above *others*, and some *Nations* above *others* (though living *together*, and using the *same dyet* and course of life) whereupon *circumspect Physicians* maturely considering that this variety cannot be alwayes imputed to the *discrepancy of dyet*, or *difference of seasonableness* in years, or such like circumstances, *they* have allowed of a great *variety* of *venomes*, or *gradations of putrefaction*, and esteem these *Pests*, though they do agree in one *generical nature*, and some *resemblance of symptomes* and *effects*, yet to arise from *different poysons*, or *gradnations of putrefaction*; and *hence* it is that no *two Plagues* are ever almost *cured* alike; nor is it possible for to find out one *universal Antidote* against *them all*: As in *poysons* some are *Septic*, and *Arsenical*; some of *another nature*, as the poyson of *Scorpions*, *Vipers*, the Serpent *Dipsas*, *&c.* of *Napellus*, *Aconite*, &c. so in *Pests*, by the *effects*, it is no *vain fancy* in the *Paracelsians*, and *Quercetan*, or *Mindererus* to guess that there is a variety of *venomes* in *qualities* corresponding much with those *known poysons*, and *analogous* unto *them*. " *His consideratis, observatoque variarum pestilitatum diversis locis ac temporibus.*

Quercetan. redivivum. Art. medic. pract. p. 39, 40, &c.
Mindererus de peste. c. 3.

c poribus graſſandi modo, magiſtra rerum experientia do-
c cebit, venenum peſtis adeo eſſe varium & diverſum ut
c ſingulæ propemodum peſti ſuæ ſi peculiaris junctæ mali-
c tiæ inſerendæ neci ſufficiens, cujus diſcrimen a nocendi
c modo & ſymptomatum varietate petendum ſiet. Dili-
c gentiſſime proinde hæc venenoſitatis & peſtis animad-
c vertenda, & curationem ſuſcepturis obſervanda. Ete-
c nim ſi peſtis graves ſomniculoſitates, ingentes ſapores
c Lethargos & comata invexerit longe aliter tractari ſeſe
c poſtulabit, quam ſi vigilas inquietudines aut ingentes
c cordis ſiccitates intulerit. Venenum enim peſtilentiale
c modo Dipſadis, modo Vipera, modo Cicutæ, modo Næ-
c pelli aut alterius exhibiti toxici naturam æmulatur, cui
c in curatione ſingulari diligentia attendendum.

c Prout igitur his, per peculiaria ac cuique propria an-
c tidota ſuccurrimus, ita & peſti, modo per hæc, modo per
c alia alexipharmaca obſiſtendum admonemus.

c Et nos quandoque hæc ipſa ſtudioſius conſiderantes,
c peſtem ab exhibitis venenis aut animalium venenatorum
c citu; morſu ac percuſſione immiſſis vix quicquam differ-
c re cognovimus.

P. Neucrantzius de purpura, c. 6. p. 69, 70.

Concerning the *Spotted Feaver* was obſerved by that *ſolid* and *circumſpect* Practitioner *Paulus Neucrantzius*. c c An etiam purpurati veneni eſſentiæ diverſitas
c variare purpuræ ſymptomata poterit? Ita cenſeo.
c Namque ea late admodum patet, & univerſo ambitu
c venenorum fere circumſcribitur, variatque ut illa varia
c & prope innumera ſunt. Hinc plerumque continua-
c rum febrium indolem ementita; interdum anginæ ma-
c lignæ epidemiæ, pleuritidis, colicæ, alteriuſve morbi
c ſpecie, ſingulari quaſi partium delectu, affligere, atque
c hujus aut alterius veneni deleteriam vim æmulari vide-
c tur, ut morbum hunc novis plerumq; ſymptomatibus emer-
c gere medici obſervarint. Ut enim in peſte varietatem
c veneni memorant Authores, qua eadem interdum Anti-
c monii, interdum Arſenici, Napelli, aut alterius venenatæ
c materiæ virus exprimit, ſymptomatum ſimilitudine, &
c alexi-

alexipharmacorum diverſitate: ut quæ uni peſtilentiæ ſaluti fuere, ſuccedentibus annis in altera peſte conſuetos effectus negent; ita & in purpura ac malignis febribus eandem affectuum diverſitatem, nec eadem remedia ſemper prodeſſe advertere licet. Sed nec diverſis ſolum temporibus purpuram diverſos characteres exprimere, ſed in una & eadem Epidemiæ conſtitutione, modo hos, modo alios referre, credendum, eadem eſſentiali ſed ſpecialiſſima veneni diverſitate; qua ut ſpecie ab altera variat, ita pro indolis ſuæ conditione diverſa ſymptomata procreat, æmula & hic πολυμόρφε peſtis conſtitutione, in qua in eadem tempeſtate diverſos ſpecie morbos, qui ex illa maligna aeris impreſſione pernicioſam vim acceperint, graſſatos fuiſſe notum, ex epidem. l. 3. ſect. 3. I might illuſtrate this further by the *difference* betwixt the Sweating Sickneſs, and other Peſts at *one time*, and *another*: But I have ſaid enough to ſhew that notwithſtanding my *Definition*, I do allow that *Peſts* may not alwayes be equal or equally *pernicious*, or equally *contagious*, and yet retain *their name*: there may be ſuch *different degrees* of *venoms*, or that *ſuperlative putrefaction*, and yet the *ſpecies* not be *varied*. I ſpeak dubiouſly about the terms of *venome* and *ſuperlative peculiar putrefaction*, becauſe the caſe is intricate, *what to call it*. I know the *Philoſophy of this Age*, which conſiſts moſt in Similitudes, will more approve of *venome*; but if it be hard to defend *Putrefaction* in order to the *production of Peſts*, 'tis no leſs difficult to illuſtrate *Contagion* by *Poyſons*; and in reference to the *practiſe of Phyſick* in *Peſts*, I think I can demonſtrate that the *Galenical notion* of *putrefaction* is the moſt *utile*. Some men think they make a great *improvement* in a *Science*, if they *illuſtrate* it by a new *Metaphor*, or introduce a *novel term*, the *import* whereof is no more *emphatical* or *perſpicuous* than the *former*; yet this muſt be deemed a *new diſcovery*, and by the *imputation of ignorance*, Students are deterred from reading the beſt Authors.

Thus

Thus we climb downward, and advance as much as he that turn'd Donne's *Poems into* Dutch.

It remains now that I proceed to *define* the Plague in that *ſenſe* to which it is in *vulgar ſpeech* reſtrained: and amongſt the ſeveral *definitions* that are given of it by *judicious* and *experienced Practitioners*, I ſhall fix upon that of *Mindererus*, as the moſt exact and conformable to the *reality* of the *Phænomena*.

Mindererus de peſt. c. 6.

The Peſt is a venenate malady, very deadly, and contagious, primarily affecting the heart, and commonly attended with a Feaver, BOTCH, Carbuncle, and Spots or Tokens.

This *Definition* whoſoever would ſee *well* illuſtrated, let him read the *Author*, and alſo *Isbrandus a Diembrook*, *Palmarius* and *Quercetan*: not to mention *others*. It appears evidently hereby that this Peſt is but a *ſpecies* of that other more *general notion*: It ariſeth from a *peculiar ſort of putrefaction*, or *venome*, and though it have *ſymptomes* different from its *contradiſtinct ſpecies*, though it be *peculiarly* called the *Peſt*, the *Sickneſs*, the *Plague*, ἐπιδημία, νόσος ἐπίδημος, λοιμος, *il morbo*, *la malady*; and ſuch as make it a *ſuperlative putrefaction*, to ſhew that it is but of a *different degree* from the others, may alledge that ſometimes *malignant peſtilential Feavers* have turned into this Peſt naturally, or upon an *evil method of curing*. Exact *Definitions* are no more to be inſiſted on in *Phyſick*, than in *Law*; 'tis enough that they are *commonly true*, and that a *judicious Practitioner* knows when they *hold*, and when they *fail*. I have demonſtrated that the *Plague* (ſo called vulgarly) is not ſo *pernicious* alwayes as the *Spotted feaver*, or *peſtilential peripneumony*: it is not alwayes contagious. " *Tales ſunt illæ febres, quas* Galenus, 3. epid. comm. 57. *& alibi*, peſti'entes

Isbr. a Diemb. l. 1. c. 1.

Schenckius obſ. l. 6. & *Hieron. Rubeus* in C. Celſ. l. 3. c. 7. p. 143. *Riverius* prox. l. 17. ſect. 3. c. 1.

Isbr. a Diemb. L. 1 c. 12. §. 4.

c peſtilentes ſine peſte *vocat; quales ſe non raro obſervaſſe*
c *teſtatur* Amatus Luſitanus *cent. 7. curat. 27. Imo*
c Quercetanus *in Alexic.* & Riverius *ſect. 3. de febr.*
c *cap. 1. dicunt hujuſmodi febres non ſemel viſas fuiſſe*
c *cum veræ peſtis indiciis* (*puta* Anthracibus & Exan-
c thematibus) & *tamen a vera peſte longe diverſas fu-*
c *iſſe, quia non erant* contagioſæ. *Has febres* Saxionia
c & Riverius *appellant* Peſtilentes ſporadicas; *Crato*
c & *Liddelius*, peſtilentes privatas: *alii* peſtilentes
c ſpurias.—— I ſhall add a paſſage of *Crato*, which is not that to which this *Author* refers, but which He, who lived *ſo long*, and was ſo *competent a Judge* by the *Experience* of many *peſtilential diſeaſes*, as his *dying words* doth import to the World: c c *Initio vero hoc tenen-*
c *dum, quod ſupra etiam monui*; peſtilentes morbos *hoc*
c *quidem habere proprium*, *ut ſint* plurimis pernicioſi,
c graves & lethales. *Ut autem* per contagium com-
c municentur, *niſi putredo ad iſtam malignitatem in iis*
c *devenerit, ut morbidam expirationem tranſmittant in*
c *alia corpora*, non neceſſe eſt. *Plurimos enim interire*
c *nullis prorſus contagionis indiciis extantibus*, *apparet*.
c Peſtilentes *igitur* privatos, *niſi putredo in iis orta mor-*
c *bidum expiret, aſtantibus innoxios eſſe affirmamus*——
c *Accedit ad hoc quod noſtra quoque ætate in multis regio-*
c *nibus orientalibus & Meridionalibus*, Peſtilentias *plu-*
c *rimis exitioſas fuiſſe conſtat*: *in quibus neminem* con-
c tagione contaminatum, *nec ullos a conſuetudine ægro-*
c *tantium refugiſſe legimus*. i. e. In the firſt place it is to be held for a certain truth, that peſtilential diſeaſes have their properties, that *they are deadly to moſt, being very afflicting, and mortal.* But that they ſhould be *contagious*, it is not neceſſary, except the putrefaction be come to that height as to produce ſuch a morbid exhalation as may infect other bodies. For it is moſt apparent that many dye, and yet there is not any ſign of contagion to be demonſtrated by its proper effect, of having introduced the like ſickneſs in others.

P. Zacchias though he do hold that the *Peſt* is moſt commonly contagious, yet he proves *it is not neceſſary* it ſhould be alwayes ſo Queſt. Medico-legal. l. 3. tit. 1. Qu. 2 ſect. 21, 22.

Io. Crato aſſert. lib. de febr, peſtilent. p. 18

Id. ibid. p. 20.

We do therefore avow, that thoſe we call *private Peſts* do not prejudice or infect thoſe that attend the ſick party. ——Beſides, even in our Age ſeveral deadly Plagues have deſtroyed multitudes in the Eaſtern and Southern Climates of the World, which yet have not diffuſed themſelves by *contagion* unto others, ſo that none have declined to converſe with the ſick.

Whereas it is ſaid in the Definition that it *primarily affects the Heart*, it is not to be underſtood ſo *conſtantly*, though generally a great *debility and diſorder of the pulſe, and proſtration of the ſtrength enſue*: for ſometimes an *indiſpoſition in the Stomach* is the firſt *ſenſible* ſymptome the Patient *feels*: and ſometimes the *Head* is firſt and *primarily* affected, as in thoſe that are *Lethargical* and *Soporous*, or *Vertiginous*. I read that *A. Paræus* going to viſit one ſick of the *Plague*, and haſtily taking up the *bed-clothes*, that he might ſee and dreſs a *Bubo* which he had in his groin, and *two Carbuncles* upon his belly: preſently a ſudden thick, noiſome vapour iſſuing from the *Carbuncles* that were apoſtimated, and broak, pierced his noſtrils and diſcompoſed his brain, ſo that he ſwooned away, and fell as it were dead and ſenſeleſs upon the floor: afterwards coming a little to himſelf, he was giddy, and every thing ſeemed unto him to turn round, ſo that he had fallen to the ground again had he not laid hold of ſomething whereby to ſupport himſelf: All the comfort he had was, that he found no indiſpoſition about his heart, no pain, no palpitation, nor any ſign of any powerful and fixed debility of his ſtrength. Which confirmed him in an opinion that only the *animal ſpirits* were tainted with that peſtilent exhalation; in which he was more ſatisfied, by reaſon that he *ſneeſed* preſently ten times with ſo great a violence, that his *noſe fell to bleeding*, and *that evacuation* (as he thought) freed him from the *venenate* impreſſion: for he felt no other ill effect afterwards.

A. Paræus Chirurg. l. 21. c. 120.

In

In that I say it is *commonly attended with a Feaver*; it is upon the grounds already alledged: I add that *P. Paaw* the great Physician at *Leiden* (in those Provinces the *Plague* is frequent) denies that the vulgar *Pest* is to be *defined* by a Feaver. For it is not an *usual Feaver*, neither *sanguine*, or *putrid*: there happens *oftentimes* no signs of either of those in the *Plague*. It is not a *malignant Feaver*; for neither is the *type* and *characterisme* thereof to be discovered here, no nor the *least sign of heat* frequently. You will say that sometimes 'tis a *common Feaver*, sometimes *malignant*: but neither is that *true*, for albeit *frequently*, nay, for the most part it be accompanied with a *Feaver*, sooner or later, yet is that but a *symptome* thereof and *separable* from it: they have different originals; the *Pest* a *venome*; the *Feaver* a *putrid heat*. All *poysons* do not ingender a *Feaver* in him that takes *them*: why should we think otherwise of *Plagues*? In short, *Experience* shews that sometimes there is no sense of any *great* or *unusual heat* in the infected, no *thirst*, no alteration in the *Pulse*, *Urine*, or *Respiration*: where that which is *essentially consequent* to a *Feaver* is not to be found, 'tis but reasonable to deny the *antecedent* to be there. I refer the *unsatisfied* for to be further convinced by *Sennertus*.

P. *Paaw* tract. de Pest. c. 2.

Sennertus de febr. l. 4. c. 1.

As to the *Botches* about the *Ears*, *Arm-pits*, and *Groin*, and the *Spots* (or *Tokens*) and *Carbuncles*, those are so no necessary to this Pest (though many die before any appear) that the *populace* is rather *suspicious*, than *convinced*, till *they* be seen.

Having premised this *long discourse*, which I hope will seem neither *useless*, nor tedious to any Reader, the *solution* of the ensuing *Questions* will be brief.

Concerning *Phlebotomy* in the *Pest*, whether it be *useful* or *legitimate*, it is a question not to be resolved otherwise than by distinguishing upon the *Pest*: If it

be taken in a general ſenſe, I anſwer that it hath been frequently practiſed with *great and viſible ſucceſs* in ſeveral *Epidemical, contagious* and *frequently* mortal diſeaſes, as the (*a*) *Spotted Feaver*, the (*b*) *Pædanchone* or *ſtrangulatory diſeaſe* of the Children in *Spain*, *Sicily* and *Naples*: In the (*c*) *Hungarian* Feaver alſo: and in *Epidemical catarrh* (when it was in *Holland*) *Forreſtus* did with great ſucceſs *bleed*, in 1580. Obſ. Medicin. l. 6. obſ. 3. But I muſt alſo ſay, that our *Experimental Phyſicians* in theſe caſes do ſometimes interfere one with another; and at leaſt it is manifeſt that moſt of thoſe diſeaſes have been cured without *bleeding*: that it is to be adminiſtred with *great caution*; yet is it never more true that *Medicaments* are as it were the *hands of the Almighty*, then when in ſuch diſeaſes *Phlebotomy* is *prudently* uſed: all circumſtances muſt be *duly* weighed to the *adminiſtration* thereof; and there are ſo many *fatal inſtances* of the *evil ſucceſs*, that though they are ballanced by *contrary Experiments* made in all *Countries*, yet ought the *wiſeſt* to be *timorous*; and the *ignorant* ought to conſider, that *ſince in ſuch diſeaſes moſt dye by the violence thereof* (and this is their nature) *it ought not to ſeem ſtrange, if Phlebotomy prove as ineffectual, as other Remedies do.* In ſuch diſeaſes, 'tis not raſhly to be attempted in the *beginning* of the diſeaſe (as *Coyttarus* in his excellent diſcourſe obſerves) but when it is in his *progreſs*, and that the *nature* and *tendency* of the *poyſon* is manifeſt, and the *ſtrength of the Patient* better judged of, if *indications* require it, nothing is more *beneficial*; not that it is then *adminiſtred* to evacuate the *poyſon* (as our ignorant *Helmontian* doth ſuppoſe) but to allay the *putrid Feaver*, and *concoct* it; for *revulſion* in *peſtilential Pleuriſies*, and *Squinancies*, (wherein

(a) *Coyttarus* de purpurat. febr. c. 12, 13.
Petrus a Caſtro de febr. punctiular. ſect. 6. & in dedicatoria epiſt.
Dileſt. Luſitan. de venæ ſect c. 9. art. 4. p 129.
Septal. de Peſt. l. 5. c. 17. p. 217.
(b) *Bartholin.* de Angina puer. exercit. 5.
Severin de abſceſſ. p. 449.
Menatus conſult. 14.
(c) *Cabelchover.* cent. 5. cur. x. in ſcholio.
Ruland. de febr. *Ungaric* p. 270. & alibi.

(wherein each wise man divides his cares betwixt the *malignity* and the *disease it self*) to prevent further *putrefaction* or those inconveniences which some *direful symptomes* menace the Patient with.

Hieron. Rubeus in *C. Celsum.* l. 3. c. 7. p. 140, 141.

In the more *limited sort of* Pest, commonly termed the *Plague*, as the disease is *usually* more pernicious than in *those others*, so do *Physicians* multiply *their fears*, and Patients their *suspicions*. They are much divided upon the point; and though the generality of *modern Writers* oppose *Phlebotomy*, (or suspect the good issue), nor can the *happy instances* for the *contrary* (though they may be alledged in all *Countries*) suffice to imbolden the present Age. The happy practise of *Botallus* is not regarded: *Massarias* (as learned and as well versed as he was in the *Plague*) is not able to convince men: Not *Rodericus Fonseca* at *Lisbone*, not *Septalius* at *Millain*, not the cautelous *Forrestus*, who let them *blood* in the *Pest* at *Delph* within eight hours after *infection*, though it were occasion'd from *famine* and *misery*, and that with *good success*: not the president of *Hofman* in the *Plague* at *Norimberg*: Not the constant practise of the *Egyptians*, who in all *pestilential diseases*, and *plagues* do *bleed largely* the sick parties, as *Prosper Alpinus* relates; and whose *example* and *experience* did so convince *him*, that in that excellent Book of his *de Medicina Methodica* he thus expresseth himself for the cure of *pestilent Feavers*, and the Plague. " *Itaque laxata alvo lenitorio Pharmaco,*
" *ad vacuationem sanguinis declinandum. Primo secta*
" *interna vena cubiti dextri in ea copia mittatur, quam*
" *vires permittent: & in altero die, si corpus sanguine*
" *abundaverit, & vires permiserint, ex altero brachio*
" *evacuatio sanguinis erit repetenda: in pueris, & in*
" *viris, & mulieribus albidioribus sanguis mittendus*
" *itidem erit copiosus cruribus scarificatis, ex qua sca-*
" *rificatione, facta sanguinis evacuatio in febribus pe-*
" *stilentibus est utilissima, quia cum ipsa quantum san-*
" *guinis*

Botallus de venæ sectione, c. 7
Massarius de Pest. l. 1.
Roderic. a Fonseca in append ad *Iacchin.* de febr. p. 354:
Septal. de pest. l. 5. c. 14.
Forrestus Obs. l. 6. obs. 17.
C. *Hofmann.* Anti Fernel. lemm. 64.
Prosper Alpin. de medic. Ægyptior. l. 2. c. 7. p. 54.
Prosper. Alpin. medic. meth. l. 5. c. 9.

c *guinis volumus, evacuamus, ſine virium magna jactura*
c *(quod e longinquis partibus educatur) ſine violentia, &*
c *quod maxime in hiſce febribus videtur deſiderandum,*
c *quoniam ex ea evacuatione a ſupernis partibus adinfer-*
c *nas fiat revulſio: Unde mirum non eſt, ſi nos ſæpius*
c *in hiſce ægrotis vigilias, vel dolorem capitis, vel deli-*
c *rium, vel ſurditatem, vel aliud ſymptoma ſimile con-*
c *tinuo ſublatum viderimus, præſertimque ſi copioſa fa-*
c *cta fuerit evacuatio. De hac Oribaſius ita ſcripſit:*
In lib. 7. c. 20. c *Et ſane dum peſtilentia vehemens Aſtam deprehendiſ-*
c *ſet, multoſque perdidiſſet, meque etiam morbus attigiſ-*
c *ſet, ſecunda morbi die remiſſione febris facta, crus*
c *ſcarificavi, duaſque libras ſanguinis detraxi, hacque*
c *de cauſa periculum vitavi. In pueris & infantibus in*
c *quibus una cum peſtilenti febre vel exantheniata vel*
c *variolæ apparuerint, perpetuo ſummam utilitatem ab*
c *hac evacuatione ſubſecutam vidimus; qua Ægyptii*
c *Arabeſque nullum utilius præſidium in hiſce febribus*
c *eſſe longa experientia cognoverunt.* Not all this can either *juſtifie* or excuſe a *Galeniſt* unto theſe *Helmontians:* I add the opinion of *Eraſtus* who lived in *Germany*, which *Climate* and *Nation* may ſeem to correſpond better with the *Engliſh*; after *he* had given his reaſons for *Phlebotomy* adminiſtred in the *beginning*, in *plethorick bodies*, and where nothing doth *contrajudicate*, eſpecially in ſuch as were uſed to *bleed*, or had any ſanguinary evacuation at the noſe or other parts, ſtopped on a ſudden: and after he had refuted the Arguments of ſuch as would cure the *Peſt* in his time with *Alexipharmacs* and ſweating only; he adds;
Th. Eraſtus epiſt. 25. c c *Equidem una conſuetudo fere præſtare videtur, ut*
c *noſtris hominibus venæ ſectio in hoc morbo minus no-*
c *cere videatur. In hac peſte prorſus multi ex ruſticis*
c *vicinorum pagorum nullo alio remedio affugerunt.* I might cite the judgment of many more in *this caſe*, as *Rondeletius*, *Mercatus*, *Trincavellus*, *Jo. Coſtæus*, *Altomanus*, *Pereda*, *Andernacus*, *Sarracenus*, *Maſſa*, *Mongius*,

Mongius, *Paſchalius*, *Mercurialis*, *Zacutus Luſitanus*, *Bayrus*, *Carolus Valeſius du Bourgdieu*, *Joel*, *Thevartius* (upon *Ballonius*'s Epidemia p. 50, 51.) *Hieronymus Rubeus* upon *Celſus*: Of the Ancients *Aetius*, *Avicenna*, *Avenzoar*, and that Latine *Hippocrates*. *C. Celſus* who particularly ſayes, *ſi vires ſinunt, ſanguinem mittere optimum eſt; præcipueque ſi cum ardore febris eſt*. But I conclude with *this aſſertion*, that in the Controverſie about *Phlebotomy in the Plague*, the number of them that *defend it* exceeds that of thoſe which *oppoſe it*, and their *learning*, *judgment*, *practiſe*, the *reaſons*, the *Experiments* they alledge at leaſt, *equals* what their *Adverſaries* can pretend unto: Some *Arabians* have *adviſed* in the beginning of the *Plague* (before the diſeaſe hath impaired their ſtrength) that the infected ſhould bleed even *until they ſwooned*: And *Platerus* informs me, that ſome having purſued that counſel avow that they have *cured many*, and therefore diſlike all *minute Phlebotomy* in compariſon of that which is *ſo copious*: thus *Bayrus* in his Treatiſe of the *Peſt* commands, that if the Patient be *robuſt*, *plethorick*, and the *peſtilential Feaver* be accompanied with a *violent putrid Feaver*, he *bleed largely*. But to deal *candidly* in *this affair*, I do think that of the *Germans* the moſt are averſe from Blood-letting in the Plague, and depend upon *Sudorifics*.

Citantur ab Isbrando a Diemerbrook de peſt l. 3. c. 3. §. 1.

C. Celſ. Medicin l. 3, c 7.

Cæterum in contrariam ſententiam abeunt complures alii, iidemque doctiſſimi Medici, docentes omnino ſecandam eſſe venam, nec minores pauciores ve adducunt felices ſucceſſus. *Hieron. Rubeus* in *C. Celſum*. l. 3. c 7. p. 140.

Moſſarias de Peſt. l. 2. (inter opera) p. 531.

F. Platerus de febr. (inter opera) p. 161.

Becauſe our *Helmontian* doth ſo opiniater it about the *Plague*, and would reduce all *Feavers* (almoſt *all diſeaſes* to be cured like it) and inſults over the *Galeniſts* for their ignorance in the *cure*, and upbraids *them* with their *ill ſucceſs* in that *malady*, I ſhall briefly repreſent ſome of the *reaſons* of their evil ſucceſs; and the *arguments* they urge againſt *ſweating* in all

Peſts,

Peſts, in the *beginning*, and *proceſs* of the *cure*; as alſo ſum up their *practiſe* about *Phlebotomy*.

When I conſider the *general deſolation* which the *Plague* hath made in all parts of *Europe*, notwithſtanding the various wayes uſed for the *cure* thereof, and that *Germany* and the *Netherlands* can no more boaſt of an infallible cure, no nor of a better ſucceſs than *Florence*, *Venice*, *Rome*, *Naples*, *Paris*, or *Sevill*, methinks it is apparent that the *recommendation* of *Medicaments* or *Methods of curing* in the *Plague* ariſeth from the obſervation that ſome by the *happy uſe* of *ſuch a courſe*, or ſuch a *Medicament*, have (perhaps amidſt *dangerous* and ſeemingly *deadly* ſymptomes) *been recovered*: And herein *Septalius*, and *Maſſarias*, and others, ſay as much for *themſelves*, as *Mindererus*, or *Sennertus*: And what *Celſus* ſaith of *Hippocrates*, *Herophilus* and *Aſclepiades*; I cannot but call to mind when I reflect on the *ſeveral Methods of Phyſick* endeared unto us by *judicious Practitioners*: Si rationes ſequi velimus, omnium poſſe videri non improbabiles: ſi curationes, ab omnibus his ægros perductos eſſe ad ſanitatem. So juſt I am to thoſe *excellent Practitioners*: It is certain that in *Phyſick* we do oftentimes commit the Fallacy of *non cauſa pro cauſa*, and attribute thoſe *effects* to *one Medicament*, or *Method*, which either did but *accidentally* enſue *thereon*, it contributes *nothing to the effect* (but only happening to be inſiſted on *at* or *before the time* that the *Phœnomenon* diſcovered it ſelf) or only *removing* ſomething that hindered the *natural production of the effect*, or only acting as a *partial cauſe* therein, or meerly *ſtrengthening* or making room for nature that the *effect* might more *eaſily* reſult. Thus we *directly* yield the glory of *one* or *more ſucceſsful cures* to a wrong *original*, and delude *our ſelves* and others not only with *vain hopes* in the *remedy* or *method*, but with new *Hypotheſis* raiſed upon *theſe frail foundations*, and with the

C. Celſus in pref. *Medicinæ*.

the *ſame levity* reject the *Medicaments* and *Methods of others*, with which we *celebrate our own*; nay oftentimes *with more*; for thoſe *foundations* are moſt *ſure* which are laid by the moſt men, if they be *judicious* and *obſerving*, and have endured the teſt of *more ages* and *tryals*. If *preſumption* and *arrogance* could have *entombed the Peſt*, the *moſt inſolent* but *worſt of Phyſicians*, that is *Van Helmont* had ſecured man-kind againſt its *ill effects*: and what man could have *dyed*, or languiſhed under the *Gout*, or other *Chronical diſtempers*, if the *Rhodomontades* of *Paracelſus*, *Penaltus*, *Severinus Danus*, had contained any *ſolidity*? But *experience* hath ſhewed us that we have only *exchanged*, not amended *our practiſe*, the *Tinctures*, the *Eſſences*, the *Elixirs*, however graduated, or how *glorionſly* ſoever *denominated*, do not exempt us from that condition humane nature is ſubjected unto; the general intentions of curing *cito*, *tuto*, *jucunde* are old: the *performance* now anſwers not the *pretenſes*: the *Athanaſia*, *Jucunda*, *Myſterium*, *Ambroſia* (of which you may read in *Galen*) If I were to chuſe my *Medicaments* by the *ſound they make*, would ſeem as *good* as the *Anima Auri*, *Tinctura polyaceia*, or *Pulvis peſtifugus*; and *better* than the *Alexiſtomachon*, for that like Αλεξιφάρμακον, Αλεξίκακος, Αλεξιπύρετος, would affrighten *me*, as if it were a Medicine to drive away a mans ſtomach. And if I were to *word my diſcourſe* I would more willingly uſe a *known tongue*, than an *unknown*, and *write Secretary* rather than the *Univerſal Character*: If I cannot acquire *knowledge* above others, there is more of *vanity* than *glory* in the *oſtentation* of a *new-faſhioned ignorance*. I write this becauſe I am convinced, becauſe I do not believe that there is any thing more *intelligible* in the *modiſh* word venome, then in the profound, ſordid or ſuperlative, putrefaction wherein the *Galeniſts* placed the Peſt: If ſuch a *putridity* be *unimaginable* (which yet is but

graduated above what we see, and unto which 'tis *evident* that diseases sometimes *gradatim* do arrive) it is certain that there is no such thing as the *Arsenical* or *Napelline poyson* in the Pest; but somewhat forsooth *Analogous* thereunto, as *Mindererus* and *Sennertus* assure us: and here we are put upon *Gradations* again by which *Cerusse* and *Lithargyre*, *Napellus* and *Tithymal*, *Cantharides* and *Dipsas* are to be *transmuted* into, or graduated up to *Arsenic*. Most assuredly in *this Age* the *Chimæras* have exchanged their *pasture*, and being *cloyed* or *starved* with feeding upon the Second intentions, they are now *luxuriously dieted* with Metaphors and Similitudes. I would not therefore have this *following discourse* to be construed as an *Apology* for the *failures of the Galenists*, but of all *judicious Practitioners*, even of *different principles*, who intermeddle with the *Plague*.

Mindererus de pest c. 3.

The first reason of their *miscarriage*, is the *difficulty* or rather *impossibility* of discovering of the *Plague* oftentimes in its *first approach*, and sometimes the *disease continues* and makes a progress *hopeful* and *promising* for several dayes: and then manifests it self in the *sudden death of the Patient*: of the *truth* hereof I need no Instances: the only care a *Practitioner* can shew is (after that *frequent Funerals* have informed him of an *approaching* or *raging Pest*) to tend his *Patients* whatever the *distemper* be (*little* or *great*) as if it were the *Plague*: and yet that this *supposition* is *fallacious*, I can demonstrate out of the Histories of *several Plagues*, particularly that of *Vicenza*, and *Breda*. Here then our *Physician* is no more to be *blamed*, than he is for not being an Angel, or a Deity.

Sennert. de febr l. 4. c. 1.

Anton Benivenius obs. Medicin. c. 54. *H. Florentius* in not is ad *P. Paare* de pest. p. 154, 155.

Another reason is, that the *sick parties* do not come to our *Practitioner* upon the *first* and *smallest sense* of the *disease*; for after the *Pest* hath seised upon them a

few

few hours (*eight* or *twelve* hours) *Sennertus* himself could not cure one in an hundred: and of this *Erá-* *Sennertus* de
ſtus complains (who was for *bleeding*) that *moſt that* febr. l. 4. c. 6.
died came not unto *him* till that the *Plague* had too far ſeiſed their ſpirits, and debilitated them ſo as to render *all means ineffectual*, though he tryed *Sudorifics*, *Eraſtus* ep. 25.
and complyed with all *Hypotheſis* in his practiſe. I muſt p. 90.
here note that the diverſity of *Plagues*, as to their *nature*, and *continuance*, makes a greater latitude in the *opportunity* or *timing of Medicines*, than to reſtrain it to *eight* or *ten hours*; but this cannot be known till the *Plague* hath laſted ſome while.

A third reaſon is the great difference betwixt the Nature of *one Plague* and *another*, ſo that neither *one Method* nor the *ſame Medicaments* will ſerve in all *Peſts*, no nor in *any two* hardly: beſides the particular *diverſification* which the *Peſt* receives according to *idioſyncraſy* and conſtitution of *each infected perſon*. And for this *reaſon* Nicolaus Ellain in his Treatiſe of the *Plague* (commented upon by the renowned *Guido Patin*) refuſed to write down a ſpecial cure of the *Peſt* in that book. "*Quantum ad curationem ſpectat,* *N. Ellain* de
"*eam attingere nolui, quia periculoſiſſimum eſt ex ſolis* peſt. apud
"*univerſalibus regulis curationem inſtituere, idemque* *Guibert.* Med.
"*calopodium ſingulis quibuſque adaptare. Juris perito-* Offic. p. 533.
"*rum effatum eſt*, Theorias generales non informare
"animum practicum, qui conſiſtit in ſingularibus. *Si*
"*hæc propoſitio in* jure *vera exiſtit, potiorem locum in*
"Medicina *habere debet, in affectu preſertim adeo anomalo*
"*atque inſolenti, cujus ut* Protei, *nunquam facies eadem*
"*eſt. Nulla enim peſtis alteri ſimilis eſt, niſi in uno,*
"*quod ſcilicet ea correpti maximam partem intereant.*
"*Conſtans opinio eſt, tot fere ſpecies morborum peſtilenti-*
"*um eſſe, quot annorum, quibus in vulgus graſſantur. Va-*
"*rianda proinde curatio ex affectus, cauſarum, ſymptoma-*
"*tumque varietate: ratioque habenda temporis, regionis,*

sexus, ætatis, temperamenti, peculiarisque cujusque na-
turæ (quam Græci idiosyncrasiam vocant) pluriumque aliarum conditionum a Medico expendendarum.
Insignis igitur abusus foret in peste curanda eadem uti Methodo. i. e. As for the *cure of the Plague*, I would not intermeddle with it; because it is a most dangerous thing to form a *particular practise* out of *general rules alone*, and as it were *to work all peoples shooes upon the same last.* It is a *Maxime* amongst the Lawyers, that *General Theories do not accomplish a Practitioner, whose business lies in particular and promiscuous Cases.* If this be true in *Law*, I am sure it ought to hold good in *Physick*, especially in a disease so *anomalous* and so *seldom happening*, as *this is*, and whose *Type* is as *changeable* as that of *Proteus*, never *exactly* the same. For no *Pest* ever was like unto the other *perfectly*, except it were in this one qualification, *that most that are infected dye thereof.* It is a constant opinion in many, that there *hath been*, and *alwayes will be* almost as *many sorts of Pests, as there have been, or can be Pests:* And therefore the *cure* thereof must be *varied* according as the *disease*, its *causes*, and *symptomes* vary: and particular regard must be had to the *season* and course of the *year*, the *countrey*, the *sex*, the *age*, the *temperament*, and the *individual constitutions* of persons, and many other circumstances which a judicious *Physician* must consider. Wherefore it would seem an *abuse* and *imposture* to prescribe or follow in *every Pest* the same *Method.* The truth of which *Assertion* is so *universally* assented unto, that *Mindererus* doth caution us diligently to attend unto the *course* and *symptomes* of the *Plague*, and to vary our *Method* and *Medicaments* accordingly, and tells us that in *individual* persons (and not only in the *Plague* it self) we shall find reason to guess that the *pestilential poyson* admits of an *unexpressible discrepancy* and *variety*; And partly from its *native variety*, partly from *concurrent circumstances* in

With him agrees *Gerardus Columba* de febr. pestil. c. 24. p. 253.

Mindererus de pest. c. 3.

in the *Patient*, and *Ambient*, &c. and combination with ſundry humours and intire commixing with them, it grows up and is improved into *new ſorts of venome*. And from hence, *he ſaith*, ariſeth a grand difference in the *cure* as well as *effects* of each *Peſt*, ſo that a multitude of *tryals* muſt be *circumſpectly* made, the *motion of Nature* in the recovery of the Patient obſerved, and many *die*, or *involuntarily*, yet *unavoidably*, be diſpatch'd, before the right *Method* can be known. *Hoc enim in incognitis, uſu perſæpe evenit, ut non niſi aliorum damno ſapiamus, & ex complurium ſtrage quos morbus perdidit cæteros ſervare diſcamus; nihil interim laudis Medica facultate ab hoc amittente, utpote quæ plus ſtudii in incertis obſervandis, quam in lucidis jam & perſpectis malis, commodo conſilio amovendis removendiſque ſollicita impendit; etenim & Magiſtratus ad occultum furem deprehendendum debita adhibens media, non minus ſuo officio fungitur, quam ſi hunc ipſum comprehenſum, capite plecti aut morte multari præceperit.* Since then it is manifeſt that there is ſo great a variety *in general* amongſt *Plagues*, and ſo great a *diſcrepancy* in *particular Plagues*, ariſing from *individual conſtitutions* and *other circumſtances*, ſince the *different motions* of Nature are ſuch, that ſometimes it is terminated happily by *ſweat*, ſometimes by *ſtool*, ſometimes by *urine*, or an *hæmorhagy*. Since it is a *diſeaſe* that ſo *ſeldome happens* (eſpecially here *amongſt us*) that 'tis impoſſible for *any man* to acquire a *practical dexterity* in *knowing*, or *curing* it: there is not any *intelligent* perſon will condemn the *Galeniſts*, or other *prudent Phyſitians* for ignorance; but rather deplore the *misfortune* of *Man-kind* which is ſubjected to ſo *monſtrous* and *pernicious* a *malady* as this *is*; and by a *pious* and *penitent* life rather ſtudy to *divert the Divine judgment*, than to *depend upon what is Humane*.

These

Theſe diſcourſes will ſatisfie any man of the *vanity* of thoſe pretences of an *Univerſal Medicine* for *all Plagues*; or of acquiring any *ſuperlative skill* by the diſſecting of one infected Body, or feeling one ſort of Plague twice or thrice; whereas not only each *Peſt* differs *in ſpecie*, but often *in individuo*: and *undoubtedly*, according as the *venome*, and *venenate ſymptomes* differ, ſo would the ſeveral *bodies* it diſſected.

As to the *reaſons* why the *Galeniſts* do not ſuſpend the *cure* of the *Peſt* intirely upon *Diaphoreticks*, and repeated *Sudorifics*, I find that *they* do urge *theſe*.

They do conceive that a *Phyſician* is obliged to be the *Aſſiſtant of Nature* in all diſeaſes, *except it manifeſtly appear that ſhe acteth irregularly*, or by way of ſuch an *irritation*, as to comply therewith were to deſtroy the *Patient*: they know what *their Method* obligeth them unto; and what *neceſſity* doth often put *them* upon: that *ſome diſeaſes* are cured with *more facility* than *others*; that 'tis the nature of ſome diſeaſes not to be *cured* at the *ſame time*, nor in the *ſame manner*: that as men are oftentimes forced *to make the beſt of a bad market*, ſo in *ſome indiſpoſitions* they know *what they deſire*, but know not *how to effect it*, but by *means extraordinary*, and by a greater *difference* to the *diſtemper* than it is their *inclination* to ſubmit unto: 'tis not *ignorance* and *folly*, nor the *want of generous Medicaments*, which makes them *comply*, but a *tenderneſs of the lives of the ſick*, and the diſcharge of a *good conſcience*; which *laſt* obligeth *him* alwayes to the *ſafeſt* way, and not to follow either *doubtful* and *queſtionable opinions* in *Phyſick* (which may paſs for *probable*, if that be *ſuch* againſt *which* it is *one thouſand to one* that it is falſe) or to *preſcribe Medicaments* which the *rule*

Scire enim quid fieri oporteat, magna res non eſt, ſed quibus rationibus illud efficias, id vero arduum. *Galen. 6. m. m. c. 2.*

P. Zacchias Qu. Medico-legal. l. 6. tit. 1. qu. 7. §. 2. id ibid. §. 7, 8

rules of Art and *Experience* do not *justifie*. Wherefore *they* do imagine that a *Physician* ought to *imitate Nature* when *she does well* (and well *she* does, when *she* cures the disease) and since *Nature* doth in several Plagues acquit her self sundry wayes, that therefore they ought not to confine themselves to one: Particularly, since some Plagues have been *cured* by *spontaneous* (a) *Hæmorrhagyes at the nose*, others by *Stools*, 'tis most *irrationable* to expect that *any* should do *otherwise* in so dangerous a *malady*, than to consider the *ultroneous emotions* thereof, and *accordingly* to demean himself.

(a) *Erastus* epist. 25 p. 97. c. 2. & *Thevart.* in Schol. ad *Ballon.* Epidem. p. 50, 51. *Schenkius* (ex *Parao*) l. 6. p. 770.

Secondly: Seeing that (*b*) *all Sweats* in the *beginning* of a disease are rather *bad*, than *good*: since in the *Plague* few or none are ever freed (*c*) by *spontaneous Sweats*: since Nature takes (*d*) *another course* by discharging it self into the *glandules* of the *Ears*, *Arm-pits*, and *Groin*: They do not think that they ought to pursue that *Method*. "*Ex his arbitror, patet, Sudores statim ab initio febris hujus per vim adeo calidorum medicamentorum evocatos, non tam utiles esse quam aliqui putant. Siquidem spiritus evacuantur, vires dejiciuntur, sanguis agitatur, turbatur, magisque acuitur febris, quod subtile est in sanguine excernitur, sicque crassior intus relicta materia citius & facilius interficit. Idcirco magis videtur factum & consilium eorum approbandum, qui ab his medicinis calidis abstinent, sive sudent ægri ab initio, sive non sudent. Certum namque est, sudorem sponte sub initium morbi prodeuntem, diaphoreticum & symptomaticum, non laudabilem & criticum esse.*

(b) *Hippocr.* sect. 4. *Aphor.* 36, 37, & 42. *Erast* ep. 25. p. 99.
(c) *Erast.* epist. 25. p. 97. c. 2.
(d) id. ibid. p. 98. *Erast.* ubi supra. p. 99.

Thirdly they argue; that since there is such danger least the Patient infected should dye *for want of strength* before the disease be *cured*, and that above all others the *vital* indication to *preserve the strength*

ought

ought to be moſt prevalent with a *Phyſician*, and regulate him in the adminiſtring of his *remedies*: ſince the regard *hereunto* makes them to quit their *uſual courſe* of dyet, and even *compel* their Patients to eat *plentifully*, and *drink wine* ('tis no *Helmontian* Propoſal, but tranſmitted to as from *Antiquity*) they conceive it not fit in the beginning of the *Plague* to debilitate the ſick with a *violent* and *tedious Sweat* (perhaps to be reiterated twice or thrice in twenty four hours) whereby the *ſpirits* will be *extreamly* diſſipated (much more than in *Phlebotomy*) the *humours* good and bad promiſcuouſly evacuated, and the *blood* and *groſſer humours* (which are not exhauſted by *Sweat*, and in which commonly the *Peſt* is ſeated, as is manifeſt from the *Botches* and *Carbuncles*) continue infected ſtill. *Sane ſpiritus per ſudores affatim & copioſe vacuari ſatis indicant proſtratæ afflictæque vires poſt longum ſudorem: Craſſe & inquinati ſanguinis nihil aut particulam exiguam educi, probant accidentia, quæ fere omnia fiunt poſt ſudorem deteriora.*

Isbr. a Diem-brook de peſt. l. 3 c. 2. § . 1. 6 & l. 2. c. 6. § . 14. C. Celſus l. 3. c. 7.

Eraſt. ep. 25. p. 97.

Fourthly, Though *they* do very much commend the *intentions* of ſuch as would *preſently* and without *any delay* expel the *morbific poyſon*; yet they conceive that where the *Plague* ariſeth from *previous evil humours* congeſted in the *body* by an *unſeaſonable year*, *evil diet*, or the like, that then the caſe differs much from what it is when it is contracted by a *forreign contagion*; and therefore whatever reaſons may be alledged in the *laſt caſe*, they cannot admit the *Method* as univerſal: they do apprehend that in the *firſt caſe* the *putridity* is *incorporated* and become as it were *innate* to the *maſs* of *blood*, and is no more to be eliminated by *Sweat*, then *muſtineſs* in drink is exterminated by its *working out the yeaſt*: Beſides, they do not perceive that the *ſick* receive *ſuch benefit* when Nature diſcharges it ſelf into the *Skin* by the *Spots*, or *Tokens*, that

that they ſhould *imitate* that operation by *promoting ſweat*: they are afraid that potent *ſweats* may divert *Nature* from her *uſual* and *intended courſe* of diſcharging it ſelf into the *Glandules*, and whileſt a *double evacuation* is purpoſed by the *Phyſician*, the *Patient* may find the benefit of *neither*, the *ſweat* being ſo powerful as to diſturb that *other motion*; and the *humours* in which the *venome* is incorporated being ſo *groſs* (why elſe ſhould *Nature* never take the more *facile* and *expedite* way of the *Skin*, but the more *difficult* of the *Glandules*?) as not to be exonerated in *that manner*.

Laſtly, Suppoſing the *Plague* to be a *venenate diſeaſe* they do not conceive that all *poyſons* are to be cured *one way*, and that by *ſweat*, eſpecially *as ſoon as ever they are taken*: much more if they be of a *Septic* nature: they do not believe *ſweating* to be the *remedy* for *Arſenic*, or *Lapis infernalis*, ſhould any take them. But if it were, yet *ſometimes* there is ſuch a *plethoric habit of body*, and the *veins* are ſo diſtended either *naturally* or through the *febrile agitation of humours*, that 'tis *imprudent* and *dangerous* to *promote ſweat*, till *Phlebotomy* be premiſed: for thereby the febrile heat will be mitigated, obſtructions removed, the blood *ventilated* and capable of a further *rarefaction* in order to *ſweat*, and *tranſpiration* promoted, and Nature inclined to ſweat; for bleeding doth not draw in the humours, or *poyſon*, but carries it out to the *circumference*, as *experience* doth teſtifie, and conſequently is rather *ſubſervient* unto, than *oppoſite* to the *indication* that others go upon.

Theſe are the moſt *ſolid Objections* I have met with upon the *ſubject*: in which whatever is ſuggeſted is not ſo to be underſtood, as if the *Galeniſts* did not know that their *Adverſaries* uſe or pretend to uſe *cor-*

dial and *Alexipharmacal Diaphoretick*.: as on the contrary none but this *Baconical*——G. T. would suppose, that when a *Galeniſt* ſpeaks of *Phlebotomy*, that he intends to uſe nothing elſe. Thoſe *judicious perſons* do conſider the variety of *Peſts*, that ſome of them are by *forreign contagion*, and ſeiſe upon *healthy bodies*: in theſe they are willing that the *venome* be eliminated preſently by *ſweat*, except the *Plethoric* habit make it neceſſary to *bleed firſt*, and then they *ſweat them* afterwards immediately: taking all *imaginable* care for to preſerve their ſtrength: they alſo know that in ſuch times as the *Patients* have been uſed to an *ill diet*, and debilitated through poverty and miſery, that in ſuch caſes even *Galen* would not allow *bleeding*: for how requiſite ſoever it may be for *the diſeaſe*, ſuch perſons cannot bear it: They know that *ſome Plagues* are attended with *little* or no *Feaver*, yet attended with *ſymptomes* dangerous and mortal; in theſe caſes they are for *Cordial-Alexipharmacal Diaphoreticks*, and promote *ſweat* as earneſtly as any *Helmontian*: in others the *Plague* is attended with a *Synochus* and *putrid Feaver*, in theſe they *divide* their cures, and regard both the *Feaver* and the *peſtilential venome*, &c. according as the ſtrength of the Patient will bear (they conſider not only his *preſent* but *future* ſtrength) they proceed to *Phlebotomy*: ſometimes they obſerve the *Plague* to be ſo gentle, that the infected can *go up and down* and feels *little* or *no indiſpoſition* in himſelf: in this caſe they only continue the *motion of Nature* by mild *Alexipharmaca*, that the *Botch* or *Carbuncle* do not *ſtrike in* again, and perform the reſt by a *ſollicitous Chirurgery*. In fine, as there is nothing more *rational* than all their *ſolicitude* in cures: ſo they know that in ſo *deſperate a diſeaſe*, there is no courſe to be left unattempted: the way by *Alexipharmaca* and *Sudorifics* come from *them*, and is properly *theirs*: but they urge no method generally in *any diſeaſe* almoſt; knowing

that

that the *ſame diſtemper* may be cured *ſeveral wayes* by men proceeding upon *contrary indications*, and yet the Art not violated: and in the *Plague*, as they know the great *variety* thereof *in ſpecie & individuis*, ſo their *directions* leave *us* in a great *latitude* upon *emergencies*: They underſtand that ſaying of *Celſus*: Nam quo celerius ejuſmodi tempeſtates corripiunt, eo maturius auxilia, etiam cum quadam temeritate, rapienda ſunt. As alſo that, Cum eadem omnibus convenire non poſſunt, fere quos ratio non reſtituit, temeritas adjuvat. To conclude, if there be any thing that requires a *dexterous Phyſician*, 'tis *this diſeaſe*: And if any thing can make him *ſuch*, 'tis the diligent reading and underſtanding of the *Galeniſts*; who have in this caſe *tranſcended themſelves*, and repleniſhed their *diſcourſes* with ſo *prudent cautions*, ſuch excellent *obſervations*, and *experiments*, that may raiſe admiration in all that are *converſant therein*, and ſatisfie the World, that thoſe *notional men*, following the *ancient Methods of* Science, have out-done all that ever the *ignorant raſh Experimentators of this Age* could imagine. I have a *long time* deſigned a Collection of all the choice *Experimental Writers* upon *Epidemical diſeaſes*, whether *peſtilential*, or *not*; together with the *Hiſtories* of diſeaſes that are otherwiſe of a *facile cure*, and are changed by the *mixture of a peſtilential venome*: for as there is nothing more *dangerous* and *intricate* than *ſuch diſeaſes*, ſo there is nothing wherein the generality of *Phyſicians* are leſs acquainted: 'tis an effect of the *novelty* and *curioſity* after *knick-knacks* which infatuates *this Generation*, and will ruine the *next*: there is ſo much of *pedantry* in *reading*, 'tis ſo much more *pleaſant*, and divertive to *talk of*, to make Obſervations about *freezing*, then to read over *Galen de typis*, that I do not wonder to find *D. M.* not to underſtand what the *Type of a diſeaſe* is: but I do wonder how he durſt

Hippocrat. Epidem. l. 6. ſect. 7. cum notis *Valleſii*, p. 738, 739.

C. Celſus medicin. l. 3 c. 7. de febr. peſt.

Id, ibid. c. 9.

say I was intollerably ignorant in the Rudiments of Physick, for speaking as *Galen*, and the best *Physicians* do: I may accommodate to these *impudent Scholiasts* that saying of *Hippocrates*. They that are sick, and do not know themselves to be so, have an imbecillity in their Intellectuals. Such men are possessed with a desire to *prepare their own Medicaments*, contrary to Law: and neglect the study of *necessary* and *usefull* Books in *their Profession*, which is contrary to all Reason: 'Tis easie to foresee that the *next age* will scarce be furnished with a wise *Statesman*, *Physician*, or *Civilian*; and perhaps scarce yield an accomplished Divine, or an *intelligent Sheriffe*, or Justice of Peace. And this evil is become *remediless*, by reason that the contempt of *University-learning*, and *neglect of studying*, hath so decayed the *Trade* of *Book-selling*, that no man that is *desirous* can furnish up a *Library*; which I find too true, being not able to repair the *loss* of a choice Collection of *Physick-books*, which were consumed by the fire at *London*.

Having thus explained the nature of the *Pest*, I return to the Argument of——*G. T.* which gave occasion thereunto. That the *Pest* is neither a Feaver καθ' ἑξοχὴν, nor indeed a Feaver at all, I have demonstrated: That there are some *Pests* in which *Phlebotomy* may be used, I have also made evident: As also that it was not without Singular prudence that the *excellent* and *learned* Physician Doctor Willis did pronounce that *Phlebotomy was seldome, and not without great caution, to be practised in the Pest: because the blood* being too much exhausted, *and the vessels subsideing, the necessary inclination to transpire and sweat, is not so easie to be promoted, or continued.* I have likewise evinced that the *Pest* doth not consist *properly* in a *Poyson*, but in somewhat *Analogous* thereunto: and consequently since *similitudes* are not *identified*,

De febr. p. 235

tified, 'tis fooliſhly argued by —— *G. T.* that *becauſe upon the taking of Poyſon Phlebotomy is uſeleſs:* therefore *it is ſo in the Peſt.* But neither is the *antecedent* true alwayes; as any man acquainted with the *Medicinal Hiſtory of Poyſons* doth know: for although upon the *firſt taking*, they are to be attempted with *peculiar Antidotes*, yet if *afterwards* they produce a *Feaver* in the Patient, or if there be danger of it, *Phlebotomy* is both uſed and allowed, by the Authority of *Paulus*, *Avicenna*, and *Haly-Abbas* and other *eminent Phyſicians*: particularly by *J. Cæſar Claudinus* in his *Empirica rationalis* l. 6. ſect. 1. c. 1. It is alſo *perſpicuous* out of what I have ſaid, that 'tis *falſe* to ſay that *All Feavers, be they ill conditioned, or others, have any reſemblance with, or are to be cured like the* Peſt: much leſs is it true of moſt Maladies whatever. Whereas this *Impertinent* goes about to prove it thus: *Becauſe there is quiddam deleterium in them, or a certain venenoſity.* If he take *Quiddam deleterium* and a *certain venenoſity* for *one* and the *ſame thing*: it is moſt *falſe*: ſhew me the *effects* thereof ſuch as are *viſible* in the *Peſt*, and I may grant there is ſomewhat *Analogous*: but I cannot ſee any *ſuch thing*, nor that they need any ſuch *ſuch cure*: It is poſſible —— *G. T.* may with his *Pepper-drops*, or *Eſſence* of *Ginger*, and ſuch like *hot Medicaments* drive out ſome *Puſtules* in the *Skin*, in moſt *Maladies* (and even where were none) but I ſhall not conclude *thence* that either the *indiſpoſition* was *venenate*, or that *he* did *impoyſon him*, though that be a facile thing to do where the ſame perſon acts the *Doctor* and *Apothecary*; and uſually done heretofore as any *School-boy* may know out of *Tacitus*: or Tully, pro Cluentio, where *two* are mentioned, the *one* the City-*Phyſician*, who was called *Medicus*; ſuch were retained by *Salary*, the other is termed *Pharmacopola circumforaneus*, that is a *Doctor* who kept *ſeveral Markets*, making and vending *his own*.

Joſeph. Manetſus de ſec. venæ cubiti in febr putr. malig. p. 141, 142.

C. Tacit. Annal. l. 4. & l. xii.

W. C. may learn what *Medicus circumforaneus* is out of *Menagius's* Amœnitat. jur. civil. c. 385.

own Medicaments, which gave him the opportunity of gratifying *Oppianicus* his *Mother in law*: a courtesie the other had oftentimes done for him before: I believe there were no *Apothecaries at that time in that place*, but in 1220, or 1221. when *Physick* was first made an *University-Faculty*, and *Doctors* thereof created in imitation of those in *Theology*, then were the Profession of *Physick*, and that of the *Apothecary* made distinct, and that with so much *caution*, that it is a question amongst the *Imperial Lawyers*, Whether a Physician may have any manner of Contract with An Apothecary, though to drive on other Traffick than that of Pharmacy? In the *Lombard-Chronicles* there are many cases of *Princes* (and no doubt than *others*) by *Physicians*: there was one *Sedechias* in the dayes of *Charles* sirnamed the *Bald*, in *France*: and in the reign of Queen *Elizabeth* one Doctor *Lopez*, and *Giulio*. If some mens *reading* extends not to *this knowledge*, I would have taught *D. M.* and *W. C. this* and *much more*, had not the *Artifice* and *interest* of some men debarred me from *publishing it*. If any man can shew me any Dispensatory made by any *European Physicians* (since there was so much as a Graduated Doctor) that was *previous* to the distinct Profession of *Apothecaries*, I will own then (though it be a *certain untruth*) that the practise (I do not say practising) of the *Apothecary* in the Quartane, was contrary to the *rules of Physick*, and the case *well* proposed by *D. M.* All men are at the *mercy* of such as write *what they will*, and *defame* as they *please*, and permit not *others* to *vindicate themselves*, nor undeceive the World. 'Tis *ungenerous* to pinnion a mans hands, and then *beat him*. In reference to that *Controversie*, I add that the *Statutes* of the *Colledge* command the *Physicians* to send their *Bills* to an honest Apothecary: And our *Laws* make the *Colledge* Judges of all *Receipts*, as well as *Methods of Physick*: which

Lindenbrogius Codex legum Antiq. inter constitut. *Siculas.*

Stat. *Colleg. Londin.* Miss. in biblioth. *Oxon.*

Act

Act as it conforms with the *general practiſe* of *Europe*, ſo it is very *prudential*; for hereby proviſion is made not only againſt *noxious Medicaments* (and the *high prizes* of *Arcana*) but *illegitimate Methods of practiſe*, by which laſt it is as *eaſie* to deſtroy a man, as by *poyſon*, and more *privately*: How the deſigns of the *Expe-rimentators* will conſiſt with *our Laws*, and be accommodated to *them*, I know not: I know a *Phyſician* may be *tryed* upon giving his own *Medicaments* if the Patient *miſcarry*; how he ſhall *defend* himſelf, I know not: I have not ſeen any *reaſon* alledged, that is likely to convert the *Magiſtrates* throughout *Europe* to permit it: or to gain a repeal of the two laſt *Edicts* in *Denmark* againſt it: 'Tis an *evil preſident* to diſpute againſt *wiſe Laws*: 'tis worſe to *act againſt them*: and what conſequences it will bring upon the Land, to ſee *one Profeſſion* retrench upon another, let the *Lawyers* judge: The beginner of this *Novelty*, the Lord *Bacon*, ſtopped not at *Natural Philoſophy*, but carried on his *humour* to attempt or *project a change of our Laws*. I do recommend it to the conſideration of our *Sages* in the Law, that if *Phyſick*, *Divinity* and other *Faculties* be overthrown by a company of Wits, whether it be *probable* that *they* ſhall long continue free from the attempts of the *Omniſcient*——

But I ſhall reſume the examination of the remaining *Arguments* of my Adverſary.

" Becauſe I often obſerve many ſquaring their
'*Therapeutic* intentions according to the *Definition* of
'the *Feaver*, indeavouring to cool thoſe that are in a
'ſcorching heat, by breathing a vein,
'let them know, that a *Feaver*, whoſe
'*eſſential nature* is to be inquired into
'for the *uſe of man*, is very erroneouſly defined an Accident; for a

Cannot an *Accident* be the *product* of a *fore-going cauſe*? Beſides, whoever *defined* a *Feaver* ſo as to make its *Genus* to be an Accident?

'*febrile*

'*febrile heat* is certainly the product of a foregoing
'*Cauſe* which is *primarily* to be ſearched after, then
'whatſoever depends thereon will quickly va-
'niſh.

'Now this cutting an hole in *venal* veſſels for the
'removing a bare Duality, is all one as if one ſhould
'lave out of the *Pot* ready to boil over a *ſpiritous*, or
'ſome *precious Liquor* therein contained, to the intent
'it may thereby be quailed, neglecting to withdraw
'the fire, the *impulſive occaſion* of the violent motion
'made therein. Do not they take the like abſurd
'courſe, who do think to *cool* the body in a *Feaver* by
'throwing away whole Porringers of the *Nectar of*
'*life*, never looking after the ablation of the *Cauſo-*
'*poietick* cauſe and *focular* matter ſited about the
'Stomach, which makes an *eſtuation* and *efferve-*
'*ſcence* in all the other parts. That way of *frigidati-*
'*on* which pillageth the vitals, increaſing the malady,
'only obliquely abating a tedious *quality*, is never to
'be approved by a Legitimate *Phyſitian*. He that
'will bring to a moderation the *finger* exceſſively *heat-*
'*ed* from a *thorn* impacted therein, muſt extract the
'*ſame*, otherwiſe he will take a wrong courſe by the uſe
'of meer *frigefactives*. So he that will *poſitively re-*
'*frigerate* in any preternatural *heat*, muſt eliminate that
'*ſpinous*, *aculeate*, *acid*, *acrid* matter which goads the
'*Archæus*, incenſing it that it becomes exorbitant, fret-
'ting, raging, *Heautontimorumenos*, gauling it ſelf at
'the preſence of that which it abominates, never to be
'pacifi'd till it be excluded, or ſome extraordinary
'*Sedative* given (I mean not *Opium* vulgarly prepa-
'red) which may *for a time* aſſwage its *fury* till it
'have leiſure to thruſt out the unwelcome gueſt.

I could wiſh my *Adverſary*, inſtead of conſulting the *Novum Organum* of the Lord *Bacon*, had been con-verſant in that more *ancient one* of Ariſtotle; he had not

not then committed so many errors in point of *Ratiocination*, as he now does, which renders his discourse *intricate*, *confused*, and oftentimes *impertinent*, to the great distraction of his *Reader*, and vexation of his *Antagonist*. He perpetually mistakes through an *Ignorantio Elenchi*: he never apprehends *what he opposeth*. That the *Galenists* do define a *Feaver* by a *preternatural heat diffused through the whole body*, is true: They are contented to call that a *Feaver*, which the *vulgar* does so, and accordingly to *define it*: Not but they distinguish in *Feavers* the *Material* and *Formal* cause thereof; as also the several *Efficients* thereof: and in their *Method of curing*, except necessity put them upon *another procedure*, they do *alwayes*, and are obliged to do so by the *Rules of their Art*, to remove the *Cause* of the *Feaver*: and this is notorious to all that understand the first *Elements of Physick*. They consider the *evident*, *occasional procatarctick* Causes: they consider the *Antecedent causes*, which though they are not the *immediate* and *conjunct Causes* of the *Feaver*, yet dispose unto it; and are of such *importance* as that they may often degenerate into *immediate* and *conjunct Causes*: and, which is more, in the *Cure* they do not only regard the *Cause* which gave birth unto, and produced the *Disease*, but that which doth *foment* and *continue* it, and that which may *produce* or *increase* it. *Censeri debet causa non quæ facit, aut fecit solum, sed & quæ faciet nisi quis obstet.* And although the curing of the *Disease*, or *Feaver*, be the *object* of their designs: yet *As all* wise men *consider by what means the ends they propose to themselves may be effected*, so do they deliberate *how* they shall effect their designs: and that is by removing the *Cause of the Malady*: But as in other designs it frequently happens, so here they often meet with *impediments*, which must be removed, before they can prosecute their intentions by direct means. Upon this account they are *forced* upon many

Voller. meth. med. l 3. c. 1.

ry actions which they confeſs are not immediately *conducive* to the *cure of a Feaver*, which yet they *purſue*, becauſe without doing ſo, the indiſpoſition either could *not be cured*, or not with ſuch *ſafety* as becomes *prudent perſons*. Few of them ever *bleed* that I know of *meerly* for *refrigeration*, and the extirpation of the *formal heat*, without regard to the *material cauſe* of it, which is to be *concocted* and ejected by Nature. Though *Phlebotomy* be but one operation, yet it produceth ſundry effects in the body, and in order *to each of them* is both indicated, and practiſed: For *it* evacuateth that *redundancy of blood*, which frequently occaſioneth diſeaſes, alwayes is apt to *degenerate* into a *vitious morbifick matter* during the *Feaver*, and by an *indirect* and *exorbitant motion* to afflict ſome or other *principal parts* to the great *danger*, if not *deſtruction* of the Patient: upon this account we do uſe *Phlebotomy* in *Feavers* ſometimes to diminiſh the *Plethora*, and ſo to prevent the violence of the ſucceeding *diſeaſe*, and *dangerous ſymptomes* that may inſue; and *then the veins are too much diſtended*, to *facilitate* and ſecure the operation of *ſubſequent Medicines* that are uſed to evacuate the *Antecedent Cauſe*, and to *maturate* and *expedite* the *continent morbifick cauſe*: Beſides, it *promotes tranſpiration* incredibly, gives a *new* motion to *thoſe humours* which together with the *blood* oppreſs and indanger the *internal* and *principal parts*, it *diverts* them from the *head*, and *draws them* from the *heart*, *lungs*, *ſtomach* and *bowels* into the *habit of the body*, whereby Nature being *alleviated* proſecutes her recovery by *maturation* and expulſion of the *peccant depraved matter*, deducing to its *proper ſtate* that which is *ſemi-putrid*, and not *irrecoverably vitiated*, and *ſeparating* firſt, then *exterminating* what is *incorrigible*: So the Patient recovers. Nor is there any thing more true than this, which every *Practitioner* may daily obſerve in his practiſe, that Of all the

the Medicaments which are used by Physitians, there is not any may compare for its efficacy and utility with Phlebotomy: so expedite, so facile, and so universal is it. The universality of its use appears herein, that it evacuates the redundant, it alters the exorbitant Fluxes of the peccant or deviating humours and blood: It relaxeth the vessels and pores of the body, and refrigerates the habit thereof: And therefore is so *absolutely necessary* in *putrid Feavers*, that though I do not say they are *incurable* without it, yet I pity the *languishing* condition of such as omit it, the *violence of the symptomes* being increased *thereby*, and the *cure procrastinated*, to the great *trouble* and *hazard* of the *sick*, and his great *detriment* afterwards; for you shall ordinarily meet with a slow *convalescence*, and the *blood* be so *depraved* by so *long* and *violent* an effervescence, that it becomes remediless, and degenerates into an *evil habit of body*, *Scorbute*, *Dropsie*, &c. *Valles.* Meth. med. l. 4, c. 2.

This being *premised*, (which is more clearly proved by *Experience* than *Reason*) I answer to *his* Argument, that *we* do not go about only to refrigerate the Patient, but to *concoct* and *eject* the *morbifick matter*: that we take the most befitting course to exterminate that *spinous offensive cause*: and as upon the *prick of a Thorn*, if part stick in the wound, and be buried therein, we proceed to *maturate* and bring to a *paculency* the *vitiated blood* and *humours* inherent in the part affected, and with the *suppurated matter* draw out the *fragment of the Thorn*; so we do in *Feavers*, (where the *depraved humours* are not so easily separated and extirpated, as in the *prick of a Thorn*) maturate and eject the *morbifick cause*, and thereby atchieve the *Cure*: And I do profess my self to concurre with the *Ancients* in their Opinion, that there is a great

great *Analogy* betwixt the generation of the *Hypostasis* in the *Urine* after a *Feaver*, and the production of *purulent matter* in an *Apostimation*; and that *Feavers* are but a kind of *Abscesse* in the *mass of blood*: for the proof whereof I do remit my Reader to *Ballonius, de Hypostasi Urinarum*. Amongst the *Ancients* I find two wayes commonly practised to extinguish this *Febrile Heat*, by a course corresponding with the usual wayes of *extinguishing a fire*; which are κατὰ μάεγιαν, by substracting the *fewel from it*: thus they did *Phlebotomise at once till the Patient did swoone*: the other κατὰ σβέσιν, *by quenching it*: thus they *gave them cold* Water *to drink largely*, until the sick grew pale and fell into a *shivering*: this *last* was not practised till there were *manifest signs of concoction*: But 'tis observable that upon either of *these Medicaments*, they did expect that *happy issue*, that Nature thereupon should presently discharge it self by *sundry evacuations* of the morbifick matter; so that they did not thereby intend bare *resignation*, but the *extermination* of the *concocted febrile matter*.

Id autem ita esse aperte intelliges, considerans, quæ partibus, in quibus suppurationem molimur, contingunt. Ea enim alteratio simillimæ est concoctioni, quam in materia putridarum febrium expectamus, nisi omnino est eadem. *Valles.* Method. med. l. 4. c. 2.

Galen. meth. medend. l. 9.

And thus much may suffice in answer to *this Objection*.

The last *Objection* he makes is this, as I shall form *it*.

"The great *Indications* of the *Galenists* for *Phlebotomy*, are either *Evacuation* of the *redundant blood* "in a *Plethora*: or, the *Revulsion* and direct pulling "back of what is *in flux*, or *flowed* into any part al-"ready.

"But *neither* of these *Indications* are *valid*, and "oblige them to *that practise*:

Therefore

" Therefore the practise of *Phlebotomy* is not to be
'continued.

As to *Phlebotomy* in a *Plethorick* body, he thus explodes that: ' ' If by *plenitude* be meant an *excess of* p. 122.
' *pure blood*, I absolutely deny there is any such ζήτηματος,
' or *indication* for *Phlebotomy:* for during the *good-*
' *ness* of this *juyce* there must needs be *perfect Sanity*
' arising from integrity of all the actions of the body,
' so that it may justly be reputed *madness* to go about
' to broach this Balsome of life, weakning Nature
' thereby, as long as there is health with abundance of
' strength. *Imprimis notandum* (saith *Van Helmont* in
' cap. de febr. p. 8.) *ut nunquam vires peccare possint*
' *abundantia*, *ne quidam in Methusalem: ita nec bonis*
' *sanguis peccat minuitate, eo quod vires vitales & san-*
' *guis sint correlativa.* i. e. We are to take special no-
' tice that too much strength can never be offensive to
' any, yea, not to *Methusalem*; no more can any one
' have *too much blood*, for as much as *vital strength*
' and *blood* are *correlatives.* Well then it is plain, that
' whatsoever sickness seems to indicate *Phlebotomy* up- p. 123.
' on the account of an ἀναπλήρωμα, *sanguineous super-*
' *pletion*, must needs come from an *apostate juyce* ge-
' nerated by vitious digestions, which be-
' ing hostile to life irritates the *Archæus* to
' frame the *Idæa* of a disease, not as it is
' meerly provoked by *nimiety* or *plurality*,
' but from the *pravity* of the matter:
' wherefore the case is altered now, and the
' ἔνδειξις, signification or demonstration of
' *evacuating*, doth in a strait line respect the
' *Cruor*, or *Cacochymy*, directing the *Artist* to
' reform, mundifie, and rid those impurities
' contained in the seemingly corrupted
' marred juyce, by proper means seque-
' string the *vile* from the *precious*, not to let

I would willingly know how this *Archæus* doth frame the Idæa of a *disease*? and what this *Idæa* of a *Feaver* is? to return G. T. his own words: Is it a *Substance*, or an *Accident*? *Material* or *Immaterial*? That *it specificateth* the disease, must be granted: But the *notion* is *incomprehensible*: and this Scurvy Idea is more ridiculous than the Scurvy Qualities.

out

'out indistinctly what comes next at randome to the 'furtive castration of the Eutony, lustiness, liveliness, 'and strength of the Patient, which is to be preferred 'before all motives whatsoever.

The *Analysis* & Synthesis of *inanimate bodies*, doth not teach the *Operatour* convincingly what may be done in those that are *Animate*.

''Tis certainly known to those who are through-'ly versed in the *Analysis* and *Synthesis* of the parts of 'bodies, that *ebullition*, *æstuation*, *effervescence* of fe-'bile *liquors* arising from a *pleonasme* of degenerate '*Sal.* and *Sul.* &c. *as they would have it*, may be ap-'peased and allayed by *Remedies* assisting the vitals to 'make separation, and afterwards an exclusion every 'way of what is reprobate, reserving what is accepta-'ble. This being performed, there is no fear that a '*plenitude* simply of it self can do any harm, for here-'by so expedite a course is taken, that the *overplus* is in 'a short time sent packing away by *vomiting*, *stool*, '*urine*, *expectoration* and *sweat*: For this reason, con-'sidering what *strict abstinence* the Patient is put up-'on in a *Feaver*, 'tis very unlikely a *plenitude* should be 'of any *duration*. Is it not then greater *prudence* in a '*Physician* to minorate what is superfluous by *safe*, '*profitable* wayes of *secretion*, and *excretion*, still ad-'vancing the *principal Agent*, then for *that end* to give 'vent *indiscreetly* to what comes next without any '*election*, incommodating, if not hazarding the loss of 'the *vital principles*. For believe it, *whosoever hath* '*any great quantity of blood taken from him*, *either rues* '*it for the present*, *or hereafter*: Let him that is *hetero-*'*dox* prate what he will, alledging examples of those '*sturdy*, *lusty bodies*, which have hereby received *im-*'*mediate succour*; I can make good *by practise* (and 'challenge any one to come to that; otherwise let him 'forbear his Garrulity) whosoever is cured by a *Lan-*'*cet* in this sort, is either prone to relapses, or to live 'more crazy in his younger or elder years, although 'for some short time he may not by reason of a robust 'ingrafted constitution be sensible of these inconveni-'ences.

p. 124. How much *blood* doth *he* account to be a *great Quantity*? I do not know of any *Physician* that takes away such *great Quantities*, as to create *these dangers*.

Can you *make good* by practise, that *Phlebotomy* is the *cause* of *these subsequent evils*.

''As

As for *Phlebotomy* in order to *Revulsion*, he thus ex- p. 126.
plodes it. " Another pretended way for *sanguinissi-*
" *on* is Revulsion, by which they say a violent *flux*
" of *morbifick liquor* into any noble parts, is intercept-
" ed: for this end they use the *Lancet* in a *Pleurisie*,
" *Peripneumony*, or any inward *inflammation*: But how
" far they erre herein, is well known to the *best Practi-*
" *tioners*: for although I confess they do sometimes
" in the beginning suppress, and as it were crush the
" aforesaid diseases, yet is it done *accidentally*, very *un-*
" *certainly*, rather by way of distraction of the Nature
" for the loss of its substantial treasure, than from
" any true *Revulsion* or direct pulling back of what is
" in *flux*, or already *flowed in*. 'Tis true, where the
" vessels are depleted, a *repletion* is forthwith made *ob*
" *fugam vacui*, to avoid a *vacuity*, but the supply is from
" what comes next: for as *intro* as well as *intro foras*.
" However there is no streight immediate Revul-
" sion intended from the part affected to the *Ori-*
" *fice*.

It seems strange to *me* that any man should *pretend* thus long to have diligently attended on the *practise* of *Physick*, and yet *never have seen*, or have the impudence to deny that there can be any such thing as a *surcharge of Blood*, which is that which *Physicians* call a *Plethora* or *Plenitude*. But the *continuance* of these Baconical Philosophers will in time free us from any *admiration* of *this kind*. In *Greece*, when the *Athletæ* or *Wrastlers* were publickly maintained, the *observation* indeed was more *facile* than *now*, but every Countrey almost yields frequent *cases* of such an *indisposition*: particularly 'tis easily to be remarqued in *strong*, *healthy* and *plethorick* Children, whose *sudden death*, as it often ariseth from *no other cause*, so it astonisheth the *vulgar*, and usually raiseth in them suspicions of *Witchcraft*. *Hippocrates* and *Galen* having taken notice of

the

the *evil consequences* attending this *habit of body*, do advise the owner to attempt the change of *it*, though it be accompanied with the *most perfect health* and *vigour imaginable*.

Hippocr. sect. 1. aph. 3. Ἐν τῖσι γυμνασιῶσιν αἱ ἐπ' ἄκρην ἐυεξίαι σφαλεραὶ, ἰῷ ἐν τῷ ἐχάτῳ ἔωσιν. ἃ γὰρ δύνανται μένειν ἐν τῷ αὐτέῳ, ἅτε ἀτρεμιεῖν. ἐπεὶ ἢ ἂν ἀτρεμέωσιν, ὃς ἔτι δύνανται ἐπὶ τὸ βέλτιον ἐπιδιδόναι, λείπεται ἢν ἐπὶ τὸ χεῖρον. τετέων εἵνεκα τὴν ἐυεξίην λύειν ξυμφέρει μὴ βεβαίως.

And this *habit of body*, *and fulness of blood*, which *he* saith would do *Methusalem* no harm, is observed by those who had daily opportunity to see the *sad experience* of it, to *abbreviate the life*, and occasion many *diseases*, as *Apoplexies*, *Cardiacal Syncopes*, and *Ruptures of veins in the Lungs*, *Squinancies*, *Pleurisies*, &c. So that *Hippocrates* condemns that *habit of body* again in his book *De Alimento*: and *Celsus* concurs with him therein.

Plato de repub. l. 3.

Galen in exhortat. ad bonas artes discend.

C. Celsus Medicin. l. 1. c. 1. *Ea corpora, quæ more eorum* [Athletarum] *repleta sunt, celerrime & senescunt & ægrotant.* i. e. Those bodies which are *dieted* and brought up to an *Athletick habit*, do soonest of all decline into *sickness* and *premature old age*. I never read of any *Physician*, who in his directions for *health* recommended unto his Patient that *course of life* wherein the *Athletæ* were bred up, thereby to acquire such a *Plethoric* habit: and whatever the *present sanity* were which they injoyed as to *strength of body*, their *intellectuals* were very *dull*; and the most *understanding persons* would have thought it *prudential* in such a case to *broach some of the Balsome of life*, *and weaken Nature thereby*, rather than to live in a perpetual danger of such *perillous diseases* as that *Enexy* subjecteth men unto: But our *Helmontian* doth think otherwise.

If *such an habit of body* be thus *perillous* during *perfect health*, how ought a *Physician* to apprehend it upon the *first approaches of sickness*? Doth not *then* Nature add to the *redundance of blood* by a *defective transpiration*; whereas the *veins* are so *full* as not to be able to contain more? Is not the *pulse weak*, *slow*, and *oppressed*,

oppreſſed, and the *Heart ſo debilitated* as not to be able to diſcharge it ſelf of the *Blood* which *flows into it*, and in danger to *ſtagnate in the Lungs*, or *coagulate* in the *Ventricles?* Can there ſeem any thing more agreeable to *common reaſon* in this caſe, than to practiſe *Phlebotomy*, whereby Nature is at preſent *alleviated*, the *ſurcharge of blood* abated, and the *imminent dangers* prevented? Is it not *prudential*, were a *little blood* ſo precious a thing, and the loſs *thereof* attended with ſome ſmall *irrepairable debility*? Is it not, I ſay, a part of *prudence*, to ſubmit to *leſſer* (though *certain*) inconveniences, then to run an almoſt *inevitable hazard* of the *greateſt imaginable*? I read not that the famous *Milo* arrived to the *years* of *Methuſalem*, nor yet to thoſe of *Hippocrates*: though I am apt to think *he* was ſo ſolicitous for to preſerve his *ſtrength* in its *vigour*, as not to have been much *Phlebotomized:* At the *Olympic Games* being Victor, and going to receive the *Garland* from the judges, he *fell down dead ſuddenly*, and was thence carried to his *Grave*. It is to be ſuppoſed, according to our *Helmontian*, that in that *Euexy* of body, ſomething ſo *virulent* or odious put the *Archæus* into ſuch a *fury* that it *ran mad* and deſtroyed him: whereas had it been *ſublimate* or *Arſenic*, it would not have been half ſo *exaſperated*, or *haſty*. 'Tis a moſt humourſome and ſenſleſs *Kitchin-boy*, that no man knows how to pleaſe: Suppoſe that the *Brain* might be in him a little oppreſſed with a *Vertigo*, or ſome *petty diſorder*, muſt this *capricious Duumvirate* immediately produce the *Idæa* of no gentler a diſeaſe than an *Apoplexy*, or *Epilepſy?* But to paſs from theſe *phantaſtic* cauſes, the allegation whereof leaſt becomes an *Experimental Philoſopher*, I ſhall inſtance in the effects of Bleeding in a *Plethora*.

Æmil. var. Hiſtor. l. 9. c. 31.

Anton. Benivenius Medicinal. obſervat. c. 69.

" Men commonly attribute much to the *Pulſe* in
" the diſcovery of *diſeaſes*: If that be *weak*, *low* and
" *ſmall*, they frequently preſage *death* or *mortal dan-*
" *gers*: if it be *full* and *ſtrong*, they give *hopes* or *aſſu-*
" *rance* of recovery. Yet we meet with one *Philip*, a
" drunken and *corpulent* fellow, who lying ſick in his
" bed, I found his *Pulſe* ſo weak, that it was ſcarce
" *perceivable*, and I ſhould have thought him near
" *death*, had not the *high colour of his face*, the *fulneſs*
" *of his veins*, and *his eyes ready to ſtart out*, together
" *with the ſetting of his teeth*, all proceeding from *re-*
" *dundance of blood*, hindered me from paſſing ſuch a
" *Prognoſtick*. Upon due examination of *circumſtan-*
" *ces*, I concluded the *whole diſtemper* to ariſe from a
" plenitude and that there was no ſuch *effectual re-*
" *medy* for him as ſpeedy *Phlebotomy*: His friends were
" much againſt *it*, apprehending that the *weakneſs* of his
" condition was ſuch, that it would rather *haſten his*
" *death*, than *cure him*: but at laſt they did aſſent
" thereunto, and I cauſed him to be *let blood*. And
immediately he recovered, the decay of his ſtrength
" and malady not being more *ſudden*, then was his re-
" covery.

This obſervation of *Bonivenius* is confirmed by the *like accidents* and *reſembling cures*, which had fallen under the obſervation of *Dodonæus*, as *he* relates *there* in his *Annotations*; particularly he ſayes, " " *Adfui &*
" *ego olim homini ebrioſo, qui cum ad tantam plenitudinem*
" *veniſſet, ut quodammodo ſtrangulari videretur, etiam*
" *mutus factus fuit. Huic vero & ſanguis largiter de-*
" *tractus e communi dextri brachii vena, mox loquelam &*
" *ſanitatem reſtituit.*

It

It were *endleſs* to tranſcribe caſes of *this nature*: nor do I believe that there is any *underſtanding Practitioner* who will deny that 'tis poſſible for an *exceſs of blood* to become *prejudicial* to a man. I proceed againſt our *Helmontian*: He ſayes, " that nimiety *or* " plurality *doth not offend in ſuch caſes, but the* pra- " vity: *and that the pravity is to be cured by proper* " *means ſequeſtring the vile from the* precious, *and* " *afterwards excluding it by* vomit, ſtool, urine, ſweat, " *and* expectoration. ——— I anſwer, that the caſe here being put concerning perſons that are *Plethorical*, and that *Quoad vaſa*, when the veſſels are ſo *full* that *Nature* languiſheth under the burthen, and is not able to diſcharge even the *vital operations*, by *reaſon* of its *exceſs*: though the *Blood* may have ſome mixture of *depraved humours*, and though they may have occaſioned that *ebullition* or *irregular motion of the blood*, yet is not the diſeaſe *ordinarily* to be cured without *Phlebotomy*: I will not deny but that *ſuch* caſes may be alledged, as the Patients *may* have recovered out of *thoſe kinds of diſtempers*, not only without *Phlebotomy*, but without any *help at all*.

I am willing to grant that the *Diatritarii*, or *Ægyptians* (who were prohibited by *Law* to adminiſter any manner of *Medicament* till after *three dayes* were paſſed) that *many* did recover *under their hands*: though I believe that in *Apoplexyes* and *Squinancies* multitudes muſt have miſcarried: Had not *Eraſiſtratus* done *great Cures*, his *fame* had never equalled that of *Hippocrates*: So *Petron* was a man of renown, yet perhaps what *Celſus* avoweth of the *laſt*, may be fixed upon them all. *Plures, ſi protinus a principiis excepit, interemit.* Thus much I am willing to grant, when *judicious* men are the *Phyſicians*, and inſtead of one *Medicament* do ſubſtitute *another*. But what *Aſclepiades* or *Eraſiſtratus* might do in *their dayes* (when *faſtings*, *bathings*, *oylings*, and the like were the ſo much

Ariſtot. polit. l. 3. c. 2.

Galen. adv. *Eraſiſtratum* c. 4.

C. Celſus Medicin. l. 3 c. 9.

Aſclepiades was he that *firſt* profeſſed to cure *cito, tuto, jucunde.* *C. Celſ.* l. 3. c. 4.

much the *vulgar practice* in *health*, that *Patients* willingly ſubmitted thereunto in *ſickneſs*) I cannot believe that an ignorant *Helmontian*, or other *cheating Chymiſt*, or *illiterate Experimentator* of this Age can do. Phyſick is a PROFESSION wherein we commonly ſee Miracles, the events of diſeaſes being ſuch, that Nature oftentimes tranſcends our Art, and Imagination: And ſundry unexpected Medicaments (undoubtedly raſh) do effect Cures that the moſt rational and Methodical procedures have failed in. Nothwithſtanding all this, I do not ſee that we ought to preſume upon monſtroſities; or regulate our practiſe by ſuch contingent Cures: And I ſcarce believe that any *diſcreet* perſon would either *put his life upon ſuch an adventure*, or take it well from us ſhould *we* either relinquiſh or perſwade him *thereunto*. I ſay then, that in a *Plethorick* body, ſuppoſe we that it is an *Ephemera*, or *Synochus imputris*, 'tis *well* done of the *Phyſician* to bleed the Patient, leaſt thoſe *Feavers* (which we confeſs, even without *Phlebotomy*, to be *ſafe*) leaſt the *Diary feaver* ſhould degenerate through ſome *ſecret indiſpoſition of the Patients body*, or *ſome errour committed by him*, into an *Hectick or putrid Feaver*: *Non eſt tamen negligenda hæc febris Ephemera quamvis velocis & bonæ terminationis ſit, cum ſoleat propagines malas gignere, & in alias febres tranſmutari: & licet cito terminetur, non tamen inter morbos acutos reponenda: quia caret malis accidentibus. Si error contingat in curatione vel per medicum imperitum, vel ægrotum periculum eſt ne in Hecticam tranſeat, ſi biliоſæ fuerit temperaturæ, qui egrotat: In aliis vero in putridam.* This is *confirmed* by many *obſervations*, and allowed of as *true* by *Phyſicians*: No leſs *true* is it that a *Synochus ſimplex* changes into a *putrid Feaver*, and *Squinancies*: as *Forreſtus*, and *Experience* demonſtrates. As for diſeaſes *accompanied by*, or *occaſioned from* a particular *conflux*

Ferè, quos ratio non reſtituit, temeritas adjuvat. *C. Celſus* Med. c. 13. c. 9.

Forreſt. obſ. l. 1. obſ. 3. in Scholio.

Forreſt. obſ. l. 1. obſ. 12, 13.

conflux of blood (though ſome *humours* alſo be depraved) unto any part, as *Apoplexies*, *Squinancies*, &c. for any man to think that ſuch *diſtempers* can be *cured* without *Phlebotomy*, is direct madneſs: for all other *evacuations* (by *emeto-cathartics*; which every *body* cannot endure, nor is the *Apoplectick* in a condition to *ſwallow*) or *ſtool*, *urine*, or *ſweat*, and *expectoration*, are either *uſeleſs*, or too *tedious* to depend upon in *ſuch indiſpoſitions*. Neither is that to *any purpoſe* which this *Baconical Impoſtor* ſaith, that *after ſuch a ſtrict abſtinence as the Patient is put upon in a Feaver, it is very unlikely a plenitude ſhould be of any duration*. For if the Feaver be ſuch as is accompanied with a *particular defluxion upon ony principal part*, the effects of that *abſtinence* will ſignifie nothing: for the *party* will dye (*in all probability*) before he can reap any benefit by *ſuch abſtinence*: no benefit accrues *by abſtinence*, but after *ſome time*: whereas the *malady* permits *no delay*. It is *notorious* that *ſuppuration* is not the effect of a *few hours*: and that *pain doth attract* (explain the *notion* how you will, the *Phænomenon* is manifeſt) ſo that 'tis not to be conceived how ſo *acute a diſeaſe ſhould admit of a lingring cure*. The *reſidue* doth not need any *anſwer*: for to ſay that whoſoever *looſeth any blood* doth rue it firſt or laſt, is a matter as eaſily denied by an *intelligent Phyſician*, as it is avowed by *one* that it is *not ſo*: If a *prudent* man adviſe *it*, there is not any danger (abſtracting from *caſualties*) if the *Patient* and thoſe *about him* do their *duty*. Theſe *laſt circumſtances* are ſuch that *Hippocrates* placed them in the firſt of his *Aphoriſmes*. Δεῖ δὲ μόνον ἑωυτὸν παρέχειν τὰ δέοντα ποιέοντα, ἀλλὰ καὶ τὸν νοσέοντα, καὶ τοὺς παρέοντας, καὶ τὰ ἔξωθεν. It is not *impoſſible* but that a Patient may be ſo debilitated with *his malady*, and the means uſed for his *recovery*, that he continue

Si omnia membra vehementer reſoluta ſunt (*ut apoplexia*) ſanguinis detractio vel occidit, vel liberat. Aliud curationis genus vix unquam ſanitatem reſtituit; ſæpe mortem tantum differt. *C. Celſus* Medicin. l. 3. c. 27.

Itaque mittitur, non quia multa ſubeſt copia, ſed quia ea quæ ſubeſt, tunc eſt inutilis & noxia. *Valles.* Method. med. l. 2 c. 3.

nue afterwards *infirm* : if *he* refuse thereupon to take that *Analeptick* Physick in order to a perfect *convalescence*, whatever ensues is neither the default of the *Doctor*, nor the evil consequence of *Phlebotomy*: The *same* I may say in case either the sick party be not *tractable*, or those about him *malapert* or *negligent*, or some *extraordinary casualty* do fall out. For where many concurrent causes are requisite to the producing of an effect, if it succeed not, we are not to blame what did operate, but what failed.

(Potest autem id, dum solum est, non movere, quod junctum aliis maxime movet. *C. Celsus* l. 1. in præf.

As to Revulsion that which he saith is very *weak*: ——*G. T.* averts that the best Practitioners take it for an Errour: 'Tis no great *vanity* to pretend to know more than a *Baconical Philosopher*: I do say, that no experienced Physician ever denied the operation though since the *tenet* of the Circulation of the Blood the manner how *such an effect* doth succeed admits of *some dispute*, and is *obscure*. We the *silly followers* of *Galen* and the *Ancients* do think it an *imbecillity of judgment*, for any *to desert an* experimented practise, *because he doth not comprehend in what manner it is effected*. In *eruptions of blood* and *Catarrhs* every one sees *the thing is done*: and that the Fuga vacui is not the occasion of the *subsequent blood* flowing to the *orifice of the vein*, I believe those *to whom he dedicated his Book* will assure him. How perfect *our Cures* are *continual tryals* demonstrate: How little *confidence* there is to be placed in the *Brags* of——*G. T.* after his *ten years practise*, any man may determine by taking a *due estimate of his Ignorance*.

Having thus examined all his Arguments against Phlebotomy, I come now to give *our Reasons* for it: But before I proceed to *them*, it is *necessary* that I give my Reader some account of,

The

The quantity of Blood in humane bodies.
The ſeveral Qualities of the aforeſaid Blood.
The manner of its Generation.

As to the *Quantity of Blood* that is to be found in *Humane bodies*, *Gaſſendus* holds that the *utmoſt* thereof exceeds not *five pounds*: but he is juſtly reproved for that *errour* (and for intermedling with *Medicinal* debates) by *Riolanus*; who avows, that in *ſuffocating diſeaſes* he had taken away much more *than that* within the ſpace of *twelve hours*, without indangering the Patients *life*. To relinquiſh therefore theſe *impertinent* Naturaliſts (whoſe diſcourſes in *Phyſick* have done more *hurt* than *good*; being accommodated generally to ſome *prejudicate Hypotheſis* they take up, or founded upon a *narrow experience*) let us ſee what *Artiſts* teach us, *Avicenna* and ſeveral of the *Arabians* do hold, that there are *ordinarily* in a man twenty five pounds of *blood*, and that a man may bleed at the noſe *twenty pounds*, and not dye: but if the flux exceed that, after the loſs of *twenty five pounds* he dies inevitably. *Mœbius* doth allow of *twenty four pounds* to be the *uſual quantity*: *Homo ſtaturæ decentis ad libras* xxiv. *ſanguinis in corpore habet*. *Riolanus* imagines there may be in ſuch a perſon *fifteen or ſixteen pound*, at moſt but *twenty* in a *French man*, though in a *German*, he ſayes, *Plempius* ſuppoſed there might be *thirty*. In an *healthy ſanguine* perſon, being in the prime of his years, *Marquardus Slegelius* doth ſo calculate the matter, that he concludes there cannot be above twenty or eighteen pounds; and that the generality of men contain but fifteen. Doctor *Lower* in his excellent Treatiſe *Of the Heart*, doubts whether any man hath *twenty five pounds of blood* in his body: and ſayes, that according to *Anatomiſts*, the *quantity* ſeldome *exceeds* twenty four pounds, or is leſs than *fifteen*.

I. Riola. opuſc. Anat. nova, in rot. adv. *Gaſſend.* p. 174.

Alex. Maſſaria de febr. c. 29. *Io. Riolan* Enchirid. Anatom. l. 2. c. 27.

Mœbius fund. med. c. 12. ſect. 18.

Riolan. de circulat ſang. (in *Antropograph.*) c. 15. p. 585.

M. *Slegelius* de ſangu. motu. c. 13. p. 104.

Dr. *Lower* de Corde. c. 3. p. 115, 116.

Perhaps

Perhaps the conſideration of ſuch *fluxes of blood* as ſpontaneouſly happen may give ſome light unto the controverſie, and contribute moſt to the deciſion of the grand one, *concerning the prejudice that may ariſe from the loſs of Blood by Phlebotomy.* It is recorded by *Matth. de Gradi*, that he had under his cure a *lean, ſlender* and ſeemingly *Phlegmatic* Nun, which by the *Noſe, Mouth* and *Urine* did void at leaſt *eighteen pound of blood*; and yet there remained ſo much in her, that upon the application of *Cupping-glaſſes*, they were inſtantly filled with *Blood*: and he recovered her *notwithſtanding that loſs of blood*. *Braſſavolus* relates how he had in cure one *Diana* a Lady of the Houſe of *Eſte*, which bled ſo much at the Noſe, that he ſaved and weighed *eighteen pounds*, beſides what was loſt in the clothes applied to her: ſo that the whole quantity might amount to twenty two pounds. He recovered her by the uſe of ſeveral Remedies, one whereof was *Phlebotomy*. *Marcellus Donatus* doth avow, that he weighed *eighteen pounds of blood* which iſſued from the Noſe of a certain Cook of the Cardinal *Gonzaga's*; who was recovered to as perfect health and as *good an habit of body*, as he ever enjoyed before. *Amatus Luſitanus* gives an account of one in a *Quartane*, which bled at the Noſe within five dayes twenty *pounds*: and of another who *bled* in like manner, within the ſpace of ſix dayes *forty pounds*: whom yet he cured by *Phlebotomy*. *Montanus* ſaith he cured one of the *Emeroids*, which bled every day for forty five dayes, *two pounds of blood*, and more. *Arculanus* doth tell of one Woman that avoided by the *Womb* in three dayes *twenty five pounds of blood*, and yet recovered. *Almericus Blondelus* cured in a very ſhort ſpace a Souldier who was wounded under the right Arm-pit unto the Lungs: after the man had lain without ſenſe or motion many hours, on a ſudden there iſſued an *incredible quantity of blood* out of his mouth. The like *incredible*

Schenck. Obſ. med. l. 1 p. 172

Ant. Muſa Braſſavolus comment. ad Aphor. 23. l. 5.

Marcell. Donatus de variolis. c. 23.

Amat. Luſit. curat. 100. cent. 2. & cur. 60. cent. 7.

Schenck. obſ. med. l. 3. p. 312

Schenck. Obſ. Medic. l. 4. p. 614.

Almar. Blondelus de venæ ſectione, c. 2. p. 30.

dible fluxes of blood, in *men* and *women*, he profeſſeth to have obſerved many times. *Forreſtus* relates how a Gentleman that was *his Patient* did bleed at the noſe in three dayes time, about *twelve pounds of blood*: and was recovered as well as ever. And when *William* Prince of *Orange* was wounded in the *throat* by an *Aſſaſſine*, he bled at the *Jugulars* before the flux could be ſtopped (which was not done in ſeveral dayes) *twelve pounds of blood*: and was perfectly recovered to his ſtrength again. He alſo tells of another *Gentleman*, that having drunk *Wine-muſt*, fell into ſuch an *Hæmorrhagy* at the noſe, that he bled without intermiſſion *ſix pounds*; and was cured by *Phlebotomy*, and other befitting Medicaments. *Maſſarius* did ſee a young Lady of *twelve year old*, which avoided at the noſe about *twelve pounds of blood*: but fell afterwards into a *Cachexy*. To conclude, in the words of *Jo. Riolanus*: *Imo decem vel duodecim libras per nares, vel hæmorroidas, per uterum in mulieribus effundi intra ſex octove horas ſine vitæ detrimento quotidie obſervamus.*

Forreſt. Obſ. Medic. l 1:. Obſ. 14. cum *Scholio.*

Id. ibid. Obſ. 12.

Alex. Maſſarius de febr. c. 29.

I. Riolan. inter opuſc. nova Anat. adv. *Gaſſendum.* p. 108.

As to the Quality of the Blood, it is obſervable, that there is a great variety in the *colour* and *conſiſtence* thereof, even in men of *perfect health*: many upon *Phlebotomy* convince us that *their blood* is ſeemingly *bad*, whereas they are not moleſted with *any diſtemper* at all, but enjoy as *entire a ſanity*, and are as free from diſeaſes as thoſe whoſe *blood* is to appearance *better*. I have *elſewhere* given an account of ſeveral *Phænomena* to be remarked upon the *burning of Blood*: which Obſervations are the more conſiderable, in that *J. J. Becherus* hath publiſhed a great miſtake about it: *viz. Siccum ſanguinem in igne ut lardum flagrare, & abſumi, non minori celeritate quam ipſum olium & vini ſpiritus; & in hoc quidem balſamino ſpiritu & igne, totius ſanguinis vis & bonitas conſiſtit, quoque*

I. J. Becherus Phyſic. ſubterran. l. 1. ſect 5. c. 1. p. 308.

 corrupto

corrupto aut alterato, totius ejus crasis alteratur. But I say that it is not requisite the *blood* of every *healthy person* should *burn so*: and 'tis evident by *those Experiments* of mine, that there is a very great diversity betwixt the *blood* of *several persons*, as to *inflammability*; and I know a most fair *Lady*, whose *blood* will not *burn at all*, only *crackles*, that enjoyes a *constant health* beyond most of the *Sex*, excepting a *pain at her stomach*: and I have observed that to be an usual consequent to *such blood*. I shall not illustrate this matter at present by demonstrating the great discrepancies of the *blood* in several *healthy persons*, by mixing it with *sundry liquors*, wherein the diversity of *Phænomena* doth manifest the *great variety* thereof. It is observed by many *Practitioners*, that in *healthy persons* such *blood* doth often appear upon *Phlebotomy*, as to the *Eye* seems *bad*.

Almericus Blondelus de venæ sectione. c. 1. p. 8.

"... *I have seen many* (saith *Blondelus*) *who being casually hurt in the Eye by a tennis-ball, or by some other accident wounded and bruised, have been let blood; and the blood which issued out seemed corrupt: yet have not these persons had any thing of a Feaver on them, nor been some of them sick of twenty years before.* And *Ballonius* observed *in several Ladies that out of humour rather than any indisposition were let blood in May, and six or seven poringers taken from them, that their blood was very putrid.* And he avows that in the most *fair Ladies* there generally is found such *blood* as looks *impure* and *evil*: yet that *such persons* enjoy a *greater*, or at least as *perfect an health*, and *live as long* as any that have a *better-coloured blood*. It is granted by *Slegelius*, that oftentimes upon *Phlebotomy* the *blood* which issueth forth may seem *impure*, and yet the Patient be healthy. *Nonnunquam satis insignis impuritas inest sanguini, ex cava educto, nullis gravioribus symptomatis homini molestis, ex quo patet non tantum semper periculum imminere, si nonnullæ sordes sanguini admisceantur.* I shall repeat here again the *strange*

Ballonius Epidem l. 1. p. 101. 102.

Idibid. l. 2. p. 192.

M. Slegel. de sanguinis motu. c. 9. p. 75.

blood

blood which *Simon Pauli* obſerved in an *healthy* perſon.

" *In the year* 1654. *a Citizen of* Coppenhagen, *aged* " *almoſt ſixty years, being accuſtomed to be let blood every* " *year in* May, *for prevention of the diſeaſes incident in* " *Summer, would needs be Phlebotomized in the preſence* " *of Me, and his Wife and Children: the Chirurgeon* " *having prick'd the Mediane vein, the blood as it iſſued* " *out had a peculiar but moſt noyſome ſmell, tranſcending* " *any rotten Egg, or ſtinking Ulcer,* &c. *which was ſo* " *offenſive to all in the room, that we were forced to re-* " *medy it by burning ſome perfumes. As ſoon as the* " *Blood was cold in the porrenger, the ſtench ceaſed, and* " *the blood ſeemed to be of a very good conſiſtence, and of* " *ſo radiant a Scarlet, that it equalled or rather exceeded* " *the beſt red that is to be ſeen in the moſt beautiful* " *Flowers: it contained but little ſerum.* This paſſage of his recalls to my mind the *ſerum* of the *blood* of a Maid, of a *ſanguine colour*, and perfect health, excepting a pain in her ſtomach: the *blood* which I cauſed to be taken from her ſeemed *laudable*, and burned very *vividly*; but the *ſerum* being ſet to *coagulate*, ſeemed in conſiſtence like to *tallow*, and ſmelt like thereunto. In another *Child* that died of an *Hydrops thoracis*, I obſerved the *ſerum* (as it *heated*) to *ſent extreamly ill*, and with a *penetrancy*, as if it had been *Vitriol* burning: it would not *coagulate* though I boyled it; but afterwards when it had ſtood to be *cold*, it did *jelly*. I know a *Gentlewoman* of extraordinary beauty, troubled with nothing but *Morphew* or *Vitiligo alba* on her Armes in ſome places: being let *blood*, it appeared to be all *ſerum* almoſt, and very little of any *crimſon maſs* was in it, and that not ſo *tenacious* or *fibrous* as is uſual; though it were as *well coloured* as any is: I boyl'd away all the *ſerum* (which made up about ſix ounces, or more) and it would never *inſpiſſate* or *coagulate*. The variety of *Blood* is further illuſtrated by the caſe of *Henry van Bueren* a Brewers man, who in perfect

Simon Pauli de febr. malign. ſect. 11.

Regnerus de Graef de generitol. p 84,85.

health had his *Blood* ſuch, that though it came out of the *vein* with a *ruddy colour*, yet as it *cooled* all the *ſerum* did turn *lacteous*, and reſembled *Milk*: though the *ſanguineous* Maſs retained its due colour: and this was conſtant to him whether he bled by *Phlebotomy* or any other way. A caſe like unto this is related by *Bartholin* from *Joh. Bapt. Caballaria*. Concerning the variety of *blood* in *healthy perſons*, it is further obſervable: that not only in ſome ſmall wounds admit of *no cure*, or a *difficult one*: whileſt others heal with more *facility*; in the *ſame perſons*, when they are *young*, wounds will be *eaſily cured* even by the *firſt intention*, and conjoyning of the *lips* thereof: And afterwards as they grow *more in years*, every *ſuperficial wound* gives them *much trouble*; but when they become *old* every *ſcratch* degenerates into a *foul Ulcer*: notwithſtanding that the *Patient* all this while commits not any errour in his *diet*, nor is ſenſible *otherwiſe* or any *alteration* in his *body*, or *blood*. In fine, *diligent obſervation* will aſſure any man, that not only the *Quantity of blood* doth vary in ſundry perſons, but even the *Quality*, according to the *age*, *temperament*, *and diet* of the parties; nay even according unto the *ſeaſonableneſs* and *ſeaſon of the years*. Nor ſhall I exclude the *paſſionately-angry*, or *melancholick*, or *phlegmatick* from a *latitude*, yet doth their *blood* exceedingly *vary* in the porrenger, and conſequently in the veins. I have oftentimes ſeen (and ſo hath *Van der-Linden*) that in ſome *healthy* perſons the *blood* hath been of a *redneſs* equally *florid* from the *top* to the *bottome*: in ſome there hath appeared only ſome *blackiſh ſpots* at the *bottome*, which no converſion to the *open Air* would rectifie into a *florid crimſon*: and perhaps *ſome Obſervations* may inform a man that the *florid colour* in the ſurface of the *blood* ariſeth from a *thinner* ſort of *blood*, of a *peculiar kind*, which *radiates* through a ſubtle *pellicle* on the *top*, and when the *blood*

Th Bartholin. Spiceleg. de vaſ. Lymp. c. 6.

Van der Linden Diſp. Phyſiol. 39. § .22.

Van der Linden Diſp. Phyſiol. 42. § .22.

is

is turned *topsie-turvey*, 'tis not the impressions of the *Air* that restores the *decayed colour* in the more *black blood*, but the *assent* of this *Ichorous blood* through the more *black* and *fibrous* mass. I have some grounds for this *suggestion*; but I never could see any *pellicle* or thin *concretion* upon the *turned blood*, and to the *defect thereof* I have been willing to attribute the *Phænomenon*, when the *turned blood* hath not equalled in *floridness* the first *superficies*. Some have attributed that *florid colour* to the *concretion* and *shooting* of some *volatile Salts* in the *surface of the Blood*: and think that *Kircher* mistook those *saline striæ* for *Worms* in his *Microscope*.

Simon Paulli de febr. malign.

Besides this difference in the *Mass of Blood* as to *several Individuals*, it may not be amiss to consider the difference that is betwixt the *Blood* in *sundry vessels* and *parts of the body*. It is the most *common tenet* amongst *Anatomists*, that the *Blood of the Arteries* differs very much from that of the *Veins*, Though *Harvey* seems to deny it with *much confidence*, and appeals to *Experience* for the proof of *his Opinion*: yet the *Generality*, as Doctor *Ent*, *Walæus*, and *Lower*, grant there is a great difference in the *colour* of them, and that the *Arterious blood* is the most *florid*, the *venous* is of a *darker red*: Besides this difference in *colour*, there is a *greater* which ariseth from the quantity of *serum* which abounds in the *Arterious blood* more than in the *venous*. " *Comprobavimus in accepto per nos ex crebris* " *Arteriotomiis cruorum duplem ferme compertam icho-* " *ris portionem: qua fit fortassis ut crediderit Auctor* " *lib de util. respir. Sanguinem Arterialem non concre-* " *scere velut venalem; quanquam & nos eum concrescere* " *non semel observavimus*. So *Aurelius Severinus*: with whom *Bartholin* agrees. And Doctor *Ent* sayes it is more *dilated* than the *venous*. Besides this, there is a discrepancy in the *venous blood* it self: for in the Lungs

Harvey Exercit. Anat. 2. ad *Riolan.*

Aurel. Severinus Epidoch. de aq. peric. sect. 8.

Barthol Spic. 1 de vasis Lymphat. c. 7. *Ent* de circul. sang. p. 106. & 267.

Lungs the *Blood* acquires by the mixture of the Air a *tenuity of parts* and *florid colour* exceeding any other *venous Blood:* this *Columbus* first observed, and gave *this reason* for the *colour* and great change which is made in the *Blood* by passing the *Lungs*; proceeding to an imagination that the *vital spirits* in the *Arterious blood* might be the result of this *intermixture of Air with the Blood* in the *Lights:* Most of whose opinion is taken up by Doctor *Willis* of late, and Doctor *Lower*. Besides *this* there is a *discrepancy* betwixt the *Blood* of the *Vena porta* commonly and that of the *Vena Cava:* which is not barely supposed by *Riolanus*; but yielded by *Bartholin: Sanguinem in cava prope cor puriorem esse illa qui in vena portæ continetur, omnibus in confesso est qui circulum norunt.* Upon this account it is, that by the *Emerods* there is often discharged a *black fæculent blood*, to the great benefit of the *Patient*: but whensoever it is *florid*, the effusion *thereof* brings a great *debility* (sometimes *very lasting*) unto *many persons.* May I be allowed here to take notice of the Observation of *Spigelius* concerning the *Saluatella:* that the *Blood* which issues *thereat* is more *florid* and *Arterious* than any can be drawn from the *greater veins:* this he attributes to the frequent *Anastomoses* that are betwixt the *Arteries* and *Veins* in the remote parts of the body: *wherein* he was defended by *Vesslingius*, and *Van der Linden.* Doctor *Harvey* observed in the most *healthy* and *robust* persons a certain *muccaginous* humour to *jelly* upon the surface of their *Blood*, which he esteemed to be the most *spiritous* part thereof; others take it to be not an *excrementitious Phlegm*, but indigested *Chyle:* concerning this *Mæbius* doth professe, he never observed *any of it* in the *blood* drawn, or issuing from the *veins* in the *head:* but frequently in that let out of the *arms*, and most of all in that which hath been taken by *Phlebotomy* in the *feet.* It hath been observed, that the *Blood* which hath issued from the

Reald. Columbus Anatom. l. xi. c. 2.

Willis in Exercitat. de sang. accensione, *Lower* de corde. c. 3.

Bartholin. Spicileg. de vas. Lymphat. c. 7.

Spigel. de fab. corp. hum. l. 5. c. 7.

Vesling ep. 30. & *Van der Linden* Select. n ed. c. 13. sect. 423.

Mæbius fundam med. c. 12 p. 258, 259.

the *head* at the nose hath been of a *laudable colour* and *consistence*, when that which hath been let out at the *same time* by *Phlebotomy* hath seemed impure: And the like difference hath been taken notice of betwixt the *Menstruous* evacuations of *Women*, and the *blood* taken from *their armes*. Ballonius Epidem, l. 1. p. 68.

This *variety* in the *blood* of several persons oftentimes is a cause of that *discrepancy* which is to be in the *blood* of Men that are *sick*, in so much that when sundry men are afflicted with the *same Malady*, yet may it happen so, that there be little or no resemblance found in *their blood*. Oftentimes it is observed that in *Putrid feavers* the *blood* that is let out by *Phlebotomy* is seemingly *good*. *Sæpe ad speciem & visum purus est, qui aliqui τῇ ὅλῃ οὐσίᾳ malus est. Ut contra impurus cernitur specie, qui non ita τῇ ὅλῃ οὐσίᾳ malus.* The *blood* often seems to be *good*, when it is *essentially* corrupted and noxious: and it seems often to be *bad*, when as yet it is *incorrupt*, and *alimental*. In *malignant* and *pestilential Feavers* the *blood* is sometimes *good* to see to, whilest yet the sick languish under most *violent symptomes*, and commonly *such blood* is of an *evil* prognostick. *Pessimum signum est, & timoris plenum, cum sanguis vena scissa extrahitur, si purus, rubicundus, & inculpatus educatur, veneno sitatem superare indicum est, aut putredinem in penitioribus cordis latitare. In me ipso olim observatum; nam ter per hanc febrem misso per venam sanguine, nulla prorsus putredinis nota apparebat, aliis signis immani ferocitate sævientibus.* In like manner doth *Simon Paulli* observe such *outward goodness of blood* to be a sign of *malignity* in a *Feaver*, and to be of an *ill* presage: which he illustrates with the case of an ancient man, fifty six years old, who being sick of a *Feaver* (which the *Doctor* concludes to have been *pestilential*) was *let blood*: that which issued out was so *florid*, that it transcended what any *pencil* could paint, or *pen* describe now out of any *Artery*, or the

Bellon. Epid. l. 2. p. 192.

Petrus a Castro de febr. puncticulari. p. 90.

Simon Paulli de febr. malign. §. 11, 14.

Lungs

Lungs ever ſurpaſſed it: after it had ſtood twenty four hours, the *maſs* was all *coagulated*, and no *ſerum* to be ſeen: the Patient died *ſuddenly* and without any pangs of death a little after. With this doth that Obſervation *ſomewhat* correſpond *Coyttarus* doth make (though he take it for no *ill preſage*) that in *Epidemical peſtilential Feavers*, at the beginning if they be *phlebotomiſed*, the *blood* of the Patient will ſeem very *good* and *ſound*, but in the *progreſs* it will come out *putrilaginous*. *Circa morborum Epidemialium principia——ſanguis ſi educatur, ruber & ſano ſimilis apparet——quoties iterum & tertio mittitur, corruptior, quam prius elicitur*——This *he* illuſtrates with *Inſtances*, and makes this *Hypotheſis* (moſt judiciouſly) the foundation of his *Method* to cure *ſuch Feavers* by letting the ſick *blood* in the *progreſs* not *beginning of the Diſeaſe*: And undoubtedly if *then* the *blood* do not ſeem *corrupted* but *florid*, it muſt be from ſome *venenate* or *heterogeneous mixture* which advanceth the *Native red*, as *Spirit of Vitriol* doth that of *Conſerved Roſes*.

Coyttarus de febr. pu. pur. p. 247.

It hath been obſerved, that the *blood* in the *progreſs* of *Feavers* hath ſeemed from time to time upon *Phlebotomy* to grow worſe and worſe, even on the day before a natural Criſis. *Quoties enim contigit videre in continentibus ſeu Synochis, & continuis, ſanguinem multoties & die ante Criſin emiſſum priore miſſo deteriorem, & tamen perfectam factam, & ad ſalutem ægrotantis jndicationem, ac ſine recidiva?*

Almar. Blondelus de venæ ſectione. p 8.

Ballonius obſerves that many people in the *moſt fatal Sickneſſes* have bled *pure* and to appearance *good blood*, whoſe *Bowels* and *Lungs* have been found (upon diſſection) *vitiated* and *rotten*: Others have had their *blood* extreamly *depraved*, in whoſe *vitals* no default could be found. " *Plurimis impuriſſimus ſanguis detractus eſt, imo nunquam fere purus, quibus tamen mortuis & ſectis partes omnes ſatis integræ ſunt deprehenſæ.*

Ballon. Epid. l. 2. p. 191.

" *deprehenſæ. Aliis fere ſemper purus, quibus tamen* " *viſcera & pulmones maxime putres ſunt inventi.* In a *Pleuritic* that dyed I obſerved once (beſides that his *Lungs* grew *naturally* to his ſides) that all the *left lobe of his Lungs* were corrupted and all reduced to a *moſt fætid purulency*, that the which he avoided in *great quantities* at his mouth, and upon *Phlebotomy* was very *well coloured* and ſeemingly *laudable*. My *Author* goes on: " *Scitu valde dignum eſt, qui fiat ut multis* " *quibus putrefacta pœne viſcera ſunt reperta, laudabilis* " *ſanguis detractus fuerit, item & viris, & mulieribus* " *multis* ἀχλώεις, *pallidis ac fere virentibus, cum alioqui* " *judicaſſes ſanguinem non abſimilem colori (cum quale* " *alimentum, id eſt ſuccus in venis, talis color effloreſcat)* " *tamen florentiſſimus ſanguis detractus fuerit non* " *ſeroſus nimium, non ſubviridis & virore pallidus,* " " —— *Multos videmus ſcabie infectos, aut ſimili vi-* " *tio, quibus certo affirmamus nos impurum ſectione venæ* " *ſanguinem detracturos, & tamen in iſta defædatione* " *cutis, illibatus incorruptuſque ſanguis eſt, & opinionem* " *ſpemque fallit eventus. Nos Elephanticis ſæpe lauda-* " *bilem ſanguinem detraximus. Quanquam fieri poteſt,* " *ut ſpecie laudabilis ſanguis appareat, cum inteſtinum* " *aliquod vitium in eo deliteſcat, quod quidam in habitu* " *corporis, & præſertim in partibus delicatioribus, ut in* " *facie cum ultimo elaboratur, & in rorem convertitur,* " *tum demum ſe profert & exhibet. Præterea ſiquis* " *ſplenicus eſt, aut Empyicus, manente in venis ſanguine* " *puro, non deſinit eſſe pallidus, emaciatus, ſubviridis,* " *aut nigricans, quia non in maſſa ſanguinis vitium &* " *cauſa labis eſt, ſed in alia parte.*

Id. ibid. l. 1. p. 100.

p. 101.

In like manner *Blondelus* obſerved that after a *Dyſentery* of two moneths ſtanding, accompanied with a *Singultus*, and continued *Feaver*, the Marqueſs *De Ceuvres* did upon *Phlebotomy* avoid at the *Arm* very *laudable blood*, whileſt *that of his ſtools* ſeemed to be ex-

 treamly

Almaric. Blondelus de venæ sectione. p. 68, 69.

treamly corrupted. *His superaddo sanguinem detractum omnimodas puritatis notas retinuisse, a sero bene repurgatum.*

Dr. Willis de febr. c. 1.

Doctor *Willis* after he hath made excellent use of those two old Galenical Comparisons betwixt the Blood, Wine and Milk; adds this *accurate* and *true* relation concerning the morbid discrepancy of Blood: ‘ *Thus the Blood, like Milk, in its perfe-*
‘ *ction*, as it cools *separates into the several substan-*
‘ *ces of a* fluid red on the surface, a thicker filamen-
‘ tous subsidence, and a serous liquor: *But if it*
‘ *be much depraved, when it separates in the Porringer it*
‘ *discovers it self in a* different aspect, *and each part*
‘ *assumes* another shape: *for that* cremor *which coa-*
‘ *gulates on the top, sometimes is* white,
‘ *sometimes* green, *sometimes of a* Citrine
‘ *and* livid colour: *and is not* tender,
‘ *but* viscid *and* tenacious, *so that it be-*
‘ *comes as tough as any Membrane, & is not*
‘ *without difficulty pulled in pieces. When*
‘ *the Blood hath been for some time seised with*
‘ *a Feaver, upon Phlebotomy there appeareth*
‘ *instead of the* beautiful crimson *on the*
‘ *surface a certain* white *or* other-coloured Pellicle
‘ *oftentimes: the reason whereof is that the blood being*
‘ *as it were terrified by its effervescence, the upper part*
‘ *thereof commuteth its* redness *and* tenderness *into a*
‘ white *and more* tenacious *substance: And if the*
‘ *Mass of blood be not well cleared of its saline and*
‘ *sulphureous recrements, that superficiary Skin is*
‘ *stained with a Citrine* or *livid tincture: and for the*
‘ *same reason the* supernatant Serum acquireth
‘ the same Colours: *Moreover the* purple crassa-
‘ ment of the Blood *undergoeth several variations:*

En! mvero superficies candicans gelatinæ similis in emisso sangui e, plerumque in morbosis condensata conspicitur, & vidi cori instar crassam lentamque; sæpe in febribus acutis hoc anno observatur. *Th. Bartholin.* de lacteis dubia, c. 3.

some-

sometimes it is (a) blackish, *when the Blood hath been too much terrified with a long effervescence. Sometimes the* fibres *thereof are quite vitiated, so that it will not* (b) coagulate, *but remains fluid, like thick Milk; which is a bad sign, and occurs often in putrid Feavers, and Cachexies. The* Serum *is sometimes deficient, as in Hicticks, and after too much sweat. Sometimes it* superabounds, *as in Hydropicks; and being set upon the fire will not* entirely *coagulate into a* white mass: *In some cachectical persons the blood is so* watrish, *that it resembles that sanious blood which stains the water in which flesh is washed. I knew a man of an evil habit of body, whose blood* (upon Phlebotomy) *used to seem* white *and like to Milk; which, after a course of Steel would be again* indifferently red.

(a) It was *black*, in *colour* and *consistence* like to *liquid Pitch*, in the Woman whose *menstrua* stopp'd eight moneths, and was cured by *Galen* with reiterated and large *Phlebotomies*. *Galen* 6. Epidem. 3. 29. cum notis *Van der Linden*. select. med. c. 14.

(b) Aliquando putrescentia non tam se insinuat colore, quam substantiæ modo, ut quum erit *ruber* sed non *concrescens*. *Valles*. de victu in acut. p. 45.

I shall add hereunto, that I have frequently seen the Blood in *Hectical* persons, and such as have had a *latent Feaver* to be *very serous*, and that of a *livid*, and *citrine colour*: and in *Hydropics* that have *bled at the nose* there was not any *serum* in the *blood* at all. In the *Febris alba virginea* (which I here contradistinguish from the *Chlorosis*) I extracted four hours after dinner out of the *Saphena* of such *blood*, as that the *Crassament* was laudable for *colour* and *consistence*, but the *serum* was so *white*, as not to be distinguished from *milk*: the *lacteous serum* did *coagulate*, but retained no *smell*, whereas it usually resembles a *roasted egg*: it was *saltish* to taste: At the *same time* I blooded two more in the *foot*, neither of which had any such *lacteous serum*, but a *citrine serum*: Hers, which was a young *Lady*, and in health, burned very well, and *crackled*: the other being aged sixty years, was *excellently* and

Both the *white serum* and *blood* burned *vividly* without any *crackling*.

equally coloured from *top* to the *bottom*, and the *ſerum* inclining to *citrine*: but would not *burn* at all, only *crackled* much, and *puffed with wind.* She had no indiſpoſition on her, only was troubled with a *fluſhing in her face, ſwelling of the noſe*, and an *inward heat*, ſuch as is commonly attributed to an *hot liver.* I do not attribute that *lacteſcenſe* in the firſt Ladies *blood* to the *mixture of new Chyle*, which Doctor *Lower* ſaith he hath obſerved in *Men*, and other *Animals*, being *phlebotomiſed* a while after meat, to create a *lacteous ferum*: for I never *in all my life* was ſo happy as to *ſee that*, though I have *blooded my ſelf* on purpoſe two hours after dinner to make the *tryal*: and have an hundred times examined the *blood* of others who have been *blooded* at ſuch times as we might expect to ſee that *Phænomenon* of *his.* Yet hath the *reality of his obſervation* been confirmed unto me by other *credible witneſſes*: ſo that I queſtion not but *he* may have ſeen it; though I could not in *theſe Ladies*, who all dined together about *one of the clock*, and had *done bleeding* by four.

Dr. *Lower* de corde, c. 4. p. 217.

Neither may I paſs by this Obſervation, that of all the *Serum* which I have taſted, I never found any to be *bitter*, though I extracted ſome *once* that ſeemed ſo *bilious*, that being put into an *Urinal* none could know it from urine *highly tinged*: as ſoon as I ſet it on the *fire* it coagulated with a *leſs heat* than I imagine it to have had in the *veins*, and it exchanged its *hue* for the uſual *white*, ſmelling like a roaſted Egg. Yet doth *Van der Linden* ſay, that ſome have taſted the *blood* of *Idterical* perſons, and found it bitter. ‘‘ *Actu nihil naturaliter* ‘ *in ſanguine amarum eſt: Sed nec eſſe poteſt; redderet enim ſanguinem ineptum ſuo muneri; ceu obſervare* ‘ *eſt in Idtericis. In his enim ſanguinem amaricare accepimus ab iis, qui & ipſum vena emiſſum, & urinam* ‘ *ejus guſtarunt, Aſclepiadio more.* And *Veſalius* gives us an account of one *Proſper Martellus*, a *Florentine* Gentleman,

Van der Linden diſp. Phyſiolog. 51. ſect. 19.

Andr. Veſalius de rad. *Chinæ*. p. 254.

Gentleman, much inclined to and troubled with the *Jaundiſe*, whoſe Liver was *ſcirrhous* (but *Spleen* ſound) and his Stomach turgid with *choler*; and whereſoever he opened any of his *veins* they were full of *thick choler*, and the *fluid liquor* which was in the *Arteries* did *tinge* his hands as if it were *choler*. I find the like Obſervation in *Th. Kerckringius*: that an *Icterical* Woman brought forth a dead Child in the eighth moneth, which was ſo *yellow* all over, that it rather ſeemed a *Statue of ſuch wax*, than an *humane Abortion*: being diſſected By him, inſtead of *blood* in the *veins* there was nothing but *choler*, and all the *bones* were tinged with ſuch a *yellow*, that one would have thought them *painted*.

Th. Kerckringius Obſ. Anatomic. 57.

The *Scholiaſt* upon *Ballonius* obſerved, that however the *blood* is naturally ſweet, even ſuch as upon obſtructions from the *Menſtrua* hath regurgitated and diſcharged it ſelf at the *Gums of women*: (as they have told *me*) yet in one that was troubled with the *Green-ſickneſs* the *blood*, though *florid*, was ſalt. "*Poteſt eſſe floridus color, & in ſe eſſe acrior & bilioſion: unde quædam mulier* ἀφάλμυρος, *& ejuſmodi prædita temperamento mihi affirmavit, ſiquando vel ex dentibus ſanguis affluit, vel e capite, eum ſibi guſtum ſentiri ſalſum & moleſtum.*

Billon. Epidem. l. 1. p. 111. ſect. 17.

When I was at *Barbadoes* we carried off ſeveral poor *Engliſh* thence to *Jamaica*, where many of them falling *ſick*, and ſome being *well*, were let *blood*: I obſerved that in thoſe *poor people*, which live upon nothing almoſt but *Roots*, and drink *Mobby* (a liquor made of *Potatoes* boyl'd and ſteep'd in water, and ſo fermented) that *their blood* did ſtream out *yellow*, and in the Porringer did ſcarce retain any ſhew of *red* in the *coagulated maſs*: yet are they *well* and *ſtrong*, but look *pale* and *freckled*: ſuch perſons (which are frequent in *Barbadoes*) are called *Mobby-faces*,

It

It were *infinite*, at leaſt beyond my *preſent leiſure*, to relate all that *variety* of *morbid blood*, which hath been obſerved in *ſundry diſeaſes*, and in *ſeveral perſons* languiſhing under the ſame diſtemper: as in *Pleuriſies*, the *ſcurvey*, *French-pox*, *Hypochondriacal Melancholy*, and the like: wherein if it be true, as it is, that oftentimes *diſeaſes* vary in *individuals*, 'tis no leſs certain that the *blood* doth alſo vary in *them*: ſo that oftentimes ignorant *Phyſicians* do imagine a *greater corruption* in the *blood*, and a greater receſs from what is *natural to the perſon*, and a *greater danger* in the *diſeaſe*, or in the *practiſe of Phlebotomy*, than they need; yet in *Epidemical*, or ſome *Sporadical diſeaſes*, if the *Phænomena* be as *general* as the *diſeaſe*, 'tis certain then that the *reſemblance of the blood* argues a *reſembling cauſe*, which prevails over the *idioſyncraſy of particulars*.

I know it will be expected that I ſhould ſay ſomething about the *Controverſie* whether the *Blood* be one *Homogeneous liquor*, the recrements whereof make up the *four Galenical Humours*, which are no otherwiſe *parts* thereof, than the *Lees* and *Mothers* of *Wine* are *conſtitutive parts* thereof? Or whether the four *Galenical Humours*, viz. that which is properly *Blood*, *Melancholy*, *Choler* and *Phlegm* are the *conſtitutive parts* of the *Blood*, in its *natural conſiſtence* and *Craſis*? I ſhall ſay therefore about *this point* as much as may be requiſite to my *preſent purpoſe*.

Firſt I obſerve that the *Galeniſts* are at a difference whether the *Maſs of blood* contain *thoſe Humours* actually, or *only* potentially? ſo that one may hold according to *them*, that the *blood* is as *homogeneous* a *liquor*, as any *Neoteric* doth hold it to be, though it ariſe by the mixture of *their five principles*. Amongſt others *Eraſtus* hath a *diſputation*, in which he amply

aſſerts,

asserts, that all those *Humours* when they are *actually* in the *blood* they become *excrementitious*, and are no longer parts *thereof*, but such as the ejectment thereof *depurates* and perfects the *other remaining blood*, which he confesseth to consist of *several parts* constituting *one body*, to which they are as *essential* as the *serous*, *caseous* and *butyrous* part are to *Milk*, which if they be deficient 'tis no longer *Milk*. *Nam ut non potest lac bubulum intelligi sanum & perfectum sine tribus suis partibus, sero, caseo & butyro, ita non potest sanguis probus animo concipi & definiri absque partium illa varietate.* *Fernelius* doth compare the generation of *Blood* to that of *Wine*, wherein the *Chyle* is supposed to resemble *Must*, which by *fermentation* separates and throws out such parts as are not *actually* in that *liquor*, but arise upon *fermentation* and are ejected several wayes: the more *crude parts* are *by time* digested, and then the *noble wine* brought to perfection: so he supposeth it to be in the *blood*: and thus though *all the humours* be at once as it were produced in the *Chyle*, yet are they no more parts of the *blood*, than the *Tartar* and *Mothers* are parts of *Wine*. Both these. *Similitudes* of *Milk* and *Wine* to *Blood* were first I think introduced by *Galen*, I am sure he made mention of them, and so did his Successours; to *Mercatus*, *Fernelius*, *Platerus*, *Palleriaca*: then *Carolus Piso* began to carry the comparison *further* in his discourse of *Feavers*: and after him *Quercetan*: and since that our *learned* and judicious Countrey-man Doctor *Willis*. Others held that the *blood* as it flows in the *veins*, and is designed by Nature for the *Aliment* and other uses in man, is not to be understood as *one liquor* consisting of some variety of parts, yet united into *one similar body* (the rest whereof were to be *excrements*) but a more *confused Mass* of several distinct *Alimentary Humours*, which Nature never intends to unite into *one similar body*, but to continue in a certain more *loose* mixture, each

Eraſtus disput. 19. §. 62. 54.

Fernel. Physiolog. l. 6. c. 3.

Galen. l. 2. de elem. *Galen.* 4. de usu part. c. 4. & de nat. fac. l. 3. c. 13. *Vallerioia* loc. commun. l. 1. c. xi. *Mercat.* Qu. 65.

each thereof retaining its *proper congruity* for the continuance of *life* and *health*. They do confess that there is a *pure crimson part*, *sweet* and *balsomical*, which they call *in rigour* Blood: but they say *Nature* never intended *this* for the *sole* vitalliquor; because *she* never produceth it alone; or if it be ever seen so, 'tis in a *morbid condition*; as in *malignant Feavers*, where the ἀκρατον, or *Blood* free from the *proportionate mixture of other Humours*, is reckoned amongst *evil* signs, *Qualis sanguis in malignis adurentibusque febribus solet excerni, aut è vena tunsa educi.* And therefore as none of the *Humours* are ever seen *alone*, any more than *Blood* is (for they hold *them all* to be *excrementitious*, when separate) so they conceive they *all together* in a *certain proportion* make up that *aggregate* called *Nutritive Blood*: and are all *actually* there, because *they* do observe that all of them at *sometimes* have their *distinct corruptions*, though they continue still in *one mass*; which they conceive *they could not have*, except they were actually there: They do conceive *them* to be so *there*, that the resemblance betwixt *Gall*, or *extravasated Phlegm* is but *Analogical*: so that they do not pretend to shew in the *Blood* a bitter *Gall*, or a *pontic arminonious Melancholy*: They will not allow these to be other than depravations of the *Alimentarious Humours*: and the sincere *alimental juyces* are no more pretended to be evinced by them; then the *pure Elements*, except it be *a posteriori*, by a *diversity of effects* arguing *different causes*. They saw there was a great *latitude* in the *blood* of *healthful men*, yet so as that the blood appeared with *different colours*, and consonant to the *colours* there seemed a variety in their *dispositions*, and other *corporeal qualities*: they saw the Mass of *blood* upon *perfrigeration* to go into *several substances*, and they intellectually disjoyned them *more*, for *doctrine-sake*; obliging themselves to produce *each Humour* in its *imaginary purity*, when the

Bellon. definit. Medic. p. 7.

the *Chymical* fire ſhould exhibite any body not *decompounded*, or the *Corpuſcularians* make more manifeſt *their configurations of Atomes*, or *Texture of Particles.*

Having thus ſtated the *Queſtion* with as much *perſpicuity* as I could: I purſue to enquire which is moſt *conformable to the effects in Phyſick*; for I will not undertake to determine what *God* and *Nature* do in the *production* or *mixture* of *bodies*: It is eaſie for a man to looſe himſelf *in thoſe inquiries*: He that made us can tell how we were made; our Argumentations are as *vain* as if one ſhould aſſert that a *Loaf of bread* conſiſted of *Cubes*, *Lozenges*, or *Trapeziums*, becauſe we can cut *it* into parts of *ſuch a configuration.* Let us but imagine a ſubtle *Chymiſt* to *analyſe* Chymically our *Ale*, if ever he *thereby* diſcover that it is the product of a *Barley-corn* growing into a *ſtem* and *grain*, then turned into *Malt*, *grinded*, boyled with *water*, and *fermented*; I will *aſſent* unto the Chymical reſolutions of blood: Phyſicians have been alwayes allowed hitherto to be a ſort of *groſs Artiſans*; and I remember *Maſſarias* ſomewhere calls it an *Hippocratical* demonſtration: Indicium autem Curatio. To *know bodies exquiſitely mixed*, and to mix them intimately, is a *divine attribute*: this laſt is avowed by *Galen. Miſcere corpora tota per tota, non Hominis, ſed Dei & Naturæ eſt opus.* Perhaps it may be replyed that the moſt *ignorant perſons* may ſay *thus much*: It is *true*, and if he ſpeak it knowingly, I confeſs I can ſay no more than he. "*Sed quod dicemus objectioni illi? Ignarus æque ac Philoſophus deum cauſam omnium aſſignabit: Hoc ignarus* inſcienter, *Philoſophus* ſcienter *aſſignabit: quemadmodum Ariſtoteles ait de Parmenide & Meliſſo: quem-*

De re ipſa ut neque dubites, morbi morborumq; curationes docent. Nimirum hoc eſt *maximum argumentum Hippocratis*, ait *Maſſarias*. *Van der Linden* diſp. Phyſ. c. 2.

Lacuna Epit. *Galeni* de temper. l. 1.

Franciſc. Sanchez de longit. & brevit. vitæ. c. x.

quemadmodum Cæcus *alicujus tunicam albam esse asse-*
rit.— Nil scimus. Dicamus ergo. Primarum rerum,
principiorum, aut elementorum causas reddere, nostri
non est captus: secundarum vero, utcunque. Id in
singulis quæstionibus experiri possumus.

I say then that *notwithstanding any allegations to the contrary*, it is manifest that *a certain proportion of salt, sulphur, and spirit, besides earth and water*, is neither requisite to *perfect sanity*, nor its defect *as to any particular*, the cause of diseases: and *this* is manifest out of the *constitution*, as well as *colour* of the *blood*, in *morbid* and *healthy* bodies, as appears by the *burning* and *distillation* of *blood:* There is much of truth that——. *T. T.* sayes, or *may be* so. "*Now I am*
ready to discover in reference to miserable
man: that the pretended sanguine sulphur
or Cacochymy of any in an high Feaver doth
afford more salt, water and earth, each of
them, than sulphur. I have taken that
diseased blood termed corrupt, *which*
might seem to some to abound with sul-
phur, being clearly conveyed into a Retort
with a Receiver joyned thereto, I have by
a graduated fire regulated very strictly,
brought over what possibly I could. In the
upshot upon the separation of the several
parts, I have found very little sulphur in
comparison of each of the rest.

"*At another time I procured the purest*
blood I could get from an healthful person,
putting it to the same igneous tryal, as the former dege-
nerate of equal proportion to it: then after sequestra-
tion of the parts, I could not perceive any considerable
difference in the quantity or quality of the several
parts of that sound *and the* seemingly corrupt
blood.

I have lately blooded a Woman which after a *Quartane* was troubled with obstructions of the *Spleen* and *Liver*, effervescences in the *Intestines*, *Asthmatic paroxysmes*, acute pains in her *head*, obtuse pains in her limbs, visible beginnings of a *Dropsie*; the blood at its issuing out seemed very *black*, but was pretty laudable in the porringer: it burned well, without any *crackling* or *intumescence* almost: so did the *Serum*: Here the *salt* seems rather *defective*, than to abound, as it ought by *those principles*.

I do ſay that in the *Blood* of all perſons that are in *health*, there is upon *Phlebotomy* ſomewhat that juſtifieth the *ſuppoſition* of the *Galeniſts*; but not which confirms the *Hypotheſis* of the *Chymiſts*. The *coagulable ſerum* doth commonly repreſent their *choler* in part: the *florid fluid* red their *blood:* which if *lightly* waſhed away, their is another more *darkly-coloured* which is proportionate to their *Melancholy:* and if you waſh the *fibrous maſs* well, it will be *white*, and anſwerable to their *Alimentary Pituita*, or *Phlegm*. In this *laſt part* I have the concurrence of *Malpighius*, who upon waſhing all the blood from the *concrete Maſs of blood*, found the remainder to be a *fibrous contexture* of a *whitiſh colour*, which he pitcheth upon as the materials for a *Polypus in the Heart:* And had he taken more particular notice of that *fluid blood* in the *cells* of thoſe *interwoven fibres*, he might have diſcovered *two ſorts of blood*, one that readily aſcends, and is *florid*: the other more *black* and *fæculent* which moveth not: and both theſe ſtain the water they are waſhed into with *different reds*, the one much brighter than the other. That ſome *fibrous concretion* in ſome diſeaſes, as *Rheumatiſmes* and *Pluriſies* covereth like a *pituitous maſs* the ſurface of the *blood*, whileſt *that* remains *fluid* and *blockiſh* underneath: nay I have out of *healthful blood* in the *Spring* (I am almoſt convinced that the *blood* varieth with each quarter of the year) caſt it up to the ſurface in *juſt ſuch a maſs* as covers the *top* of the blood in thoſe *diſtempers*, by putting ſome *ſpirit of Hartſhorn* into the *Porringer* before the party bled into it. I place the *choler* in the *ſerum*, not but that I know that it hath not the *taſte* or conſiſtence of the *excrementitious Bile*, but becauſe *it* hath frequently the *colour of it*, and the *Urine*, and *Pancreatick juyce* (not to mention the *Lymphæducts*) are tinged with *it*, and often-

M. Malpighi de viſcer. ſtructura. p. 163 edit. *Londinenſ.*

In quibus ſuperficies ſanguinis durior eſt & candicans, ſubjectus ſanguis in pelui ſine fibris plane eſt putridus; imo vidi in hujuſmodi, ne guttulam coloris rubri. *Bartholin.* de lacteis dubia, c. 3.

oftentimes have the *Sapor* of it: I am ſure that herein I have the *ſuffrage* of *Pecquetus* thus far, that the *choler* which is ſeparated in the *Liver* (and which tingeth the *Urine*) is extracted out of the *ſerum* of the *blood*, where it circulates firſt along *with it*, and is *percolated* out of it in the *place aforeſaid*. " *Et vero* " *nullibi per univerſas animalium ſpecies* " *abſque bilis mixtura ſanguinem reperias:* " *flaveſcens id ſerum ſalſumque teſtatur;* " *niſi forſitan aliquot in ſuppoſitis quibus dul-* " *cem mitior natura ſanguinem concoxit, ſi-* " *cut & in aliis, quibus acciditatis expertem* " *infudit, aut nullo prorſus liene inſtruxit,* " *aut ſane perexiguo.* I cite *him* the more willingly, becauſe that *If the Galeniſts ſeem infatuated for ſaying the Gall is a conſtitutive part of the maſs of blood*, (whereas they cannot *demonſtrate* ſigns thereof by its bitterneſs) a great part of *the ſcorn* may fall upon *Pecquet*, *Backius*, and *Sylvius*, *de le boe*, and other *Neoterics*, who hold it is incorporated in the *Maſs of blood*.

Vide *Pecquet.* Diſſertat. Anatomic. de circulat. ſanguin. c. xii.
Videtur humor felleus ſanguini firmiter adhæreſcere; quod in ſeri illius parte fundatus ſit, nec facile ab illo, intra ulteriorem præparationem, ſeparari poſſit. *Charleton.* œconom. Animal. c. 7. ſect. 16.

But theſe Controverſies can be no better decided than by an Enquiry into the Generation of Blood, how that it is at *firſt* begun, and *afterwards* continued: the knowledge *whereof* will conduce much not only to the deciſion of that Queſtion, *Whether there be in Nature* any foundation *for thoſe Galenical Humours, that they are* conſtitutive parts *of the Maſs of Alimental Blood?* But alſo to the main debate in hand Concerning Phlebotomy.

There is not any thing more *myſterious* and *wonderful* in the *Univerſe* I think then the *production* of *Creatures*: In ſo much that *Longinus* a Paynim doth hereupon take occaſion to celebrate the judgment of *Moſes*, in that He repreſented the *Creation* by a Divine FIAT, and *God ſaid let there be——and it was ſo.* The *Mechanical* production of *Animals* from ſo *ſmall*

and

and *tender rudiments*, out of a *reſembling ſubſtance*, in all that *variety* which we ſee, by a *neceſſary reſult of determinate Matter and Motion*, is ſo incomprehenſible and *impoſſible*, that were not *this Age* full of *monſtrous Opinions* (the conſequent of *Ignorance* and *Inconſiderateneſs*) one would have thought *no rational Men*, much leſs *Chriſtians* would have indulged themſelves in the promoting and propagating *ſuch Tenets*. 'Tis an *effect* of that *Soveraign command* that every thing hath its *being* and *faculties*; "*Quin nil aliud* "*eſt Natura, quam juſſus ille Dei, per quem res omnes hoc* "*ſunt quod ſunt; & hoc agunt quod agere juſſæ ſunt.* "*Hic, inquam, non aliud quicquam, cuique rei ſuam dedit* "*ſpeciem & formam. Per hunc non agunt modo pro* "*ſua natura, hoc eſt, prout preceptum eſt ipſis, res creatæ* "*omnes, ſed per eundem reguntur, conſervantur, propa-* "*gantur: Et nunc etiam quaſi creantur.* This is *that* which gives a beginning to the *Fœtus* particularly, and by unknown wayes contrives the *ſeminal vertue*, its *receptacle* or *Egg*, and that *colliquament* out of which *the Body is formed.* Becauſe the firſt *rudiments* of *conception* are tender and *minute*, ſuch a proviſion is made in order thereunto, that the *albuginous* ſubſtance of *ordinary Eggs* is no other than what is derived into the *female womb*: And if *we* may continue the *compariſon*, it will ſeem moſt rational to imagine, that the parts of the *whole* are contrived at *one time*, though they neither appear all *at the ſame*, nor in a *proportionate bulk*; for in ſome their *minuteneſs*, in others their *whiteneſs* and *pellucidity* conceals them from the Obſerver: But that even then there are exerted the *preludes* of thoſe *vital operations* which are ſo viſible after in *Nutrition*, I doubt not: and that as in the *Coates of our eyes* the minute *veins* and *arteries* convey their enclоſed *liquors* (though undiſcernable except in Eyes that are *blood-ſhotten*) and as in the *brain* there hath been diſcovered *veins* by ſome drops of blood iſſuing in

Eraſtus diſput. de propriet. Medic. c. 15.

This is the opinion of Dr. *Highmore*, *Velthuſius*, *Courvee*, and *Everartus*.

Jo. Jac. Wepfe-rus de apopl. p. 92. &c. Eustachius de dentil. c. 20. Th. Kerkring. Obs. Anatom. c. 26.

in *dissection*, though no *Eye* can see most of the *capillary vessels*; and as even the *veins* and *arteries* themselves are thought to be nourished by other *arteries* and *veins*, rendring them that service which they do to the more *visible* parts: even so it is in the *first formation*, wherein after some *progress* the vessels begin to appear, and *blood* first discovers it self in the *Chorion*, and thence continues its progress to the *punctum saliens*, or *heat*, and undoubtedly proceeds in its *Circle*, though the *smalness* of the vessels (as in other cases) conceal the *discovery*. So that we may imagine that the *Plastick form* (or whatever else men please to call it) doth produce the *blood* out of that *albuginous liquor* (which seems as *dissimilar* as the *blood* out of which it is derived, though the parts be *providentially* more subtilised, and *refined*) by its *own power* (as it doth the rest) through the assistance of *warmth*, and concurrence of the contemporary *fabrick*: for the *first blood* can neither give a beginning to *its self*; nor is it comprehensible, how the *weak impulse* thereof should shape out all the *veins* and *Arteries* in the *body*, according as *they are scituated*. Out of which it is *evident* that the Soul or Plastick form doth at first *reside* and principally *animate* in the *Spermatic parts* (so called not that they are *delineated* out of the *Sperme*, but out of the *Colliquament*, which is *Analogous* to *it*) and that *they* are *her* first work; the *blood* is but the *secundary*, and generated out of the *Colliquament* (for other *Materials* there are none) by the *Plastic form* which is the proper *efficient* thereof, and besides the *Auxilary Heat* there are no other *instrumental aids* but the *spermatick vessels* wherein the *Colliquament* at *first* flows to the *punctum album*, which when *blood* is generated do become the *Heart* and *sanguiferous Channels*. This is avowed by Doctor *Glissen* himself:

D *Highmore's* Hist. of Gen. c. 5.

Glisson Anat. Hepatis, c. 35.

"*Liquor hic vitalis, antequam sanguinis ruborem induit,*
" *sese a reliquis ovi partibus* (*quibus promiscue commisce-*
" *tur*)

c tur). *ſegregare incipit, & in rivulos ſeu ramificationes*
c *quaſdum excurrere, quæ poſtea venas evadunt. Rivuli*
c *iſti in unum punctum coeuntes, in eum locum conveni-*
c *unt, qui poſtea punctum ſaliens & cor appellatur. Idque*
c *fieri videtur, diu antequam ſanguinis aliquod veſtigium*
c *compareat.* Herewith agree the moſt *exquiſite Obſervations* of Doctor *Highmore*. Moſt certain it is by the *Hiſtory of Generation*, that no *Parenchymatous* part hath any operation in the firſt production of the *blood*; all their *Parenchymas* being *poſt-nate* thereunto. And if the *blood* be thus generated at *firſt*, it is but rational for us to imagine that it is *alwayes* ſo generated during *life*: For as it is true that *the ſame cauſe acting in the ſame manner will alwayes produce the ſame effect*: So in this caſe to argue *from the identity of the effect to the identity of the cauſe*, is allowable. *Eſt enim cauſarum identitas quæ facit ut effectus ſit idem: quippe effectus ſupponitur non eſſe, donec a cauſis exiſtentiam ſuam indeptus fuerit; & dum exiſtentiam illam largiuntur, oportet ipſius quoque identitatem impertiant, qua ſine effectus ipſemet nequaquam fuerit*, That the *Spermatic veſſels* in which the *blood* moves do contribute to *ſanguification* much, ſeems apparent from hence: that the *blood* is ſeen in them *before* it is in the *heart*: And becauſe it is obſerved that the fluidity *of the blood* ſeems to depend much on them; and therefore in the *dead* it doth not *coagulate* (except præternaturally) in the *veins*, though it do commonly in the *Heart*; or whereſoever it is *extravaſated*. c c *Manat præterea aliquid a venis nobis incognitum, quod dum earum ambitu ſanguis concipitur, prohibet ejus concretionem, etiam poſt mortem in cadaveribus jam perfrigidis, nequis hoc colori acceptum ferat: quod vero coralliorum inſtar aliquando repertus eſt concretus in venis ipſis, hoc merito Fernelius aſcribit morbo occulto.* And not only the *fluidity* but motion of the *blood* ſeems to depend much *thereon*: for if by a *ligature* the impulſe and ſucceſſion of blood be prevented,

Dr. *Higemore* hiſt of Gen. c. 8. p 69, 70.

Gliſſen. Anat. Hepatis. c. 35.

Greg. Horſtius Inſtit. Medic. diſp. 3. Coron. 1. Append. concluſ. 4.

Berigardus Circul. *Piſan.* 1. part. 6. circ. 7. —*Aperta namq;* in cadavera vena, ſanguis profluit. *Ent.* de circul. ſang. ſect. 137.

prevented, yet will the *blood* in the *veins* continue its courſe, and not *ſtagnate*. *Exempto e corpore corde, motus tamen ſanguinis, iſque ſatis celer in ſanis videntur. Et ſi vena ulla, etiam lactea, duobus locis ligetur, laxata ea ſola ligatura quæ cordi propinquior eſt, dum partes adhuc calent, ſemper Chylus ad hepar, ſanguis ad cor cum movebitur: qui nec a corde per Arterias, nec ab inteſtinis per lacteas, objecto potuit obice propelli: nec fluiditate ſua potius ſurſum quam deorſum movetur.* The truth hereof ſeeming undeniable to *Pecquet*, he makes uſe of a new *Hypotheſis* to ſolve *this motion* of the blood, as if it aroſe from *compreſſion of other parts*, or *contraction* in the vein it ſelf: But the *Phænomenon* will appear in ſuch caſes as admit not *this pretence*. From theſe reaſons it is that the *blood* doth not need ſo much as any *pulſe* in the *veins* and *arteries* (as appears in the firſt *fœtus*) but as ſoon as it comes to the *Heart* it does (to prevent *coagulation*) the *punctum ſaliens* (being endowed with no ſuch quality) practiſeth its *ſyſtole* and *diaſtole*, when yet no ſuch motion is obſervable in the *Arteries* at that time. Whence the *colour* of the *blood* ariſeth, is a ſecret unto me: I know that digeſtion reduceth ſome Juyces to a redneſs: in ſome Fruits the fire doth the like: in ſome the mixture of acid Liquors begets a *Vermilion*: But here I conceive none of theſe cauſes produce the effect; the generation of the *blood* is manifeſtly an *Animal Action*, and, as ſuch, unſearchable. Whatever I attribute to the *veins*, it is not to be expected that ſuppoſing they ſhould *inſtrumentally* ſanguifie, the blood ſhould turn *blew* from *them*, any more than that water put into new veſſels of *Oak* ſhould turn *white*, whereas *it* becomes *reddiſh*. Thus the *Plaſtic form* produceth *blood* at firſt, and whileſt there is no *firſt concoction* in the *ſtomack*, ſupplieth that defect by that *albuiginous Colliquament* which is of the ſame nature with the *Chyle* we digeſt our meat into, and convey by the *Lacteous Thoraciducts* into

Wolæus de motu ſang. epiſt. 2.

Pecquet diſſertat. Anat. de circulat. ſang. c. x.

into the *Heart*. That it is of the *ſame nature* appears hence, that it reſembles *it*, and that it is extracted from the Blood of the *Mother*; and produceeth in the *Embryo* the like excrements of *Choler*, and *Urine*, and *Mucoſities*; nay it hath been obſerved by *Riolanus* to have been tinged *yellow*: How much more may be concluded hence in favour of the *Galenical alimentary humours* ſuppoſed to conſtitute the *Blood*, I leave thoſe to judge who conſider the variety of *female conſtitutions*, and their condition during their *being with child*: perhaps the *Hypotheſis* of a proportionate mixture of the five Chymical Principles will not ſeem more *colourable*?

Riolanus Anthopogr. l. 6. c. ult. p. 411.

Having thus related how *Sanguification* is performed in the *Fœtus* at firſt; I come to give an account how it is performed *afterwards*; and even here it ſeems an *Action* perfectly *Animal*: for even *Concoction* in the *Stomach* is not the bare effect of Heat *elixating the meat*; nor of *acid* or *ſaline Ferments* diſſolving it; nor of any other kind of imaginary *Fermentation*: But 'tis the effect of an Animal power operating upon the Meat in the *ſtomachs* of *ſundry Men* and *Animals* by *ſeveral wayes*: This appears moſt evidently herein, that the *ſame meat* eaten by *ſeveral Perſons*, or *different Animals* produceth *different Blood* and *different Excrements*: therefore *Chylification* is an *Animal operation*, and is modulated by the *ſpecifick* and *individual* conſtitutions. Having thus determined of things, that the *Soul* in all theſe actions is the *Efficient*, we may conſider that the *meat* being *maſticated* in the *mouth*, and commixed with the *ſalival juyce* or *ſpittle*, is prepared in order to *Chylification*: then it deſcends into the *ſtomach*, and is *there* (ſometimes in a longer, ſometimes in a ſhorter ſpace) reduced into a *cremor* which is ſo far from being *acid* (as *Helmont* ſaith) that it is *generally* rather *ſaline*, as are alſo the recrements of it that remain in the empty *ſtomach*: It is true that according

Concerning *Concoction in the ſtomach* ſee the excellent diſcourſe of *Mæbius* de uſu ventriculi *fundam*: Medic. c. x where he reſolves it is done by an *Animal heat*, or *Spiritus vitalis vegeta calore prædictus*.

Vide *Mæbium* ubi ſupra; & *Kerger.* de ferment ſect. 3. c. 2. p. 200, 201.

cording to the *ſtomachs* of *Individuals*, and the *meat* they eat, it happeneth ſo that this *Cremor* hath no certain *taſte*, nor *colour*: Undoubtedly it muſt have been *bitter* in that *Marriner* (and ſuch as *he*) of whom *Veſalius* writes, that the *Gall* did naturally diſcharge it ſelf into his *ſtomach*, yet did he digeſt very well, and never was apt to *vomit*, or to be ſo much as *ſea-ſick*. From the *ſtomach* the *Cremor* deſcends into the *Inteſtines* (not *all at once*, but as it is digeſted) and there undergoes a *ſecond digeſtion* receiving into its *mixture* the *Gall* and *Pancreatick juyce*: I ſhall not ſpeak of the *variety* that hath been obſerved in thoſe *two liquors*, nor trouble my ſelf about the manner how *they operate* on the *Chyle*: It is manifeſt that upon that mixture the *Chyle* ſuffers a great alteration (if not ſome *effervеſcence*) and ſome parts are *coagulated* and as it were precipitated, and by a *ſucceſſion of changes* the ſeveral particles are ſo blended, and refracted in their *qualities*; that the excrements at laſt are neither *acid*, nor *bitter*, but (in *dogs*) both *ſapors* are extinguiſhed. In the mean time, during this deſcent of that *miſcellanes* the *lacteous veſſels* do imbibe and convey the *Chyle* in the ſhape of *Milk* to the *Receptacle*, where mixing with the recurring *Lympha* (which is ſometimes *yellowiſh*) it paſſeth through the *Ductus Thoracicus* unto the *Heart*; and in the *Subclavian* vein aſſociating with the *Blood*, it paſſeth along with *it*, ſupplying the continual *decay of the Blood*, and yielding Nutriment to the parts, and *new* matter for *excrementitious humours*: yet ſo as that it is not all tranſmuted into *blood*, or *perfected*, at *one paſſage* through the *Heart*, but by repeated *Circulations*, whereby it comes to looſe its *lacteous colour*, and contract a more *ſaline taſte*, as well as a *ſerous limpidity*, or ſome more *degenerate colour*: yet it is ſtill *coagulable* (except in a *morbid ſtate*) like to the *white of an Egg*, as the *depurated Chyle* is. It were eaſie to purſue this diſcourſe ſo as to demonſtrate

Veſalius de fabric. hum. corp. l. 5. c. 8.

Reuſnerus de urinis. c. 3. p. 42.

Dr. *Needham* deformat. fæt. p. 101, 102.

Dr. *Lower* de corde. c. 5.

demonſtrate that neither the *ſeparation of the Urine* in the *Kidneys*, nor of the *Gall* in the *Liver*, nor of the *Spittle* in the *Glandules* are other than *vital Actions*, wherein the *ſame form* which at firſt *ſhaped the Body* is principal Efficient, and that in theſe *Operations* there is ſomewhat more than *percolation* of corpuſcles *differently ſeiſed*: But I ſhall conclude this diſcourſe by accommodating of *it* to the defence of the *Galenical Alimentary Humours* ſuppoſed to conſtitute the Blood: It is manifeſt in this *Hiſtory* of *Sanguification* that the *Pituitous liquor* which is derived into the Mouth by the *ſalival veſſels* is moſt agreeable to that which is by the *Galeniſts* called *Phlegme*: it is not like the *ſerum in the blood*, for it is not *coagulable*, as the other: 'tis *inſipid*; and as it makes ſo conſiderable a part of the *chyle* in the *ſtomach*, ſo it may well be *preſumed* to continue its *intermixture* unto perfect *Sanguification*: As for the *Gall*, as its *intermixture* in *great quantities* with the *Chyle* is undeniable, ſo 'tis not improbable that it gives a fluidity to the *Chyle* beyond what it acquires in the *ſtomach*: thus *Painters* to make their *colours* and *oyls* more *fuſile*, and accommodated to their uſe, do mix *Gall* therewith. That upon the *mixture* it ſhould looſe its *bitterneſs* and become *ſweet* and *alimentary* is moſt agreeable to the *Galeniſts*, and no *wonder*: for the *ſapors* as well as *colours* of liquors are eaſily altered: and 'tis manifeſt that this happens in the *deſcent* of the *Excrements* through the tract of the *Inteſtines*: and why not in the *venæ lacteæ*? there are ſigns of *it* in the *ſlavidity* uſually obſerved in the *Arterious blood*: and 'tis remarqued by Judicious *Mæbius* concerning the *blood*, that it is not Homogeneous. *Platerus* Quæſt. Phyſiolog. 17.

" *Habet enim ſua ſtamina, & nigricantes fibras: habet ſerum ſalino principio imbutum ad putredinem eludendam: habet partem ſubtiliorem ſplendente rubore excellentem, ſuperficiem in extravaſato cruore ambientem: Et hæc in receſſu videtur cuſtodire BILEM ALI-*

Mæbius fundam. Medic. c. 14. p 339.

'MENTAREM, *flavidine ſub inſigni rubore abſcon-*
'*dita. Quæ ex rubro nigricant, flavedini ſi miſcean-*
'*tur, talem ſplendentem ruborem exhibere, cuivis cla-*
'*rum eſt.* The bitterneſs which *it* hath is produced by the *Liver* upon its *ſeparation* there, which is not done by *meer percolation*, but an acceſſional of *tranſmutation* there. As for *Melancholy*, how much the *Pancreatick juyce* reſembles *that* (when it proves not to be *bilious*, as *Veſlingius* and *Virſungus* alwayes obſerved it to be) let any man judge by what *Regnerus de Graeff* hath moſt ingeniouſly written *thereof*: beſides that the more *black* part of the *blood* ſeems as *eſſential* thereunto, as the *more bright* Red. But the *Degeneration* of the *Blood* into thoſe *Excrementitious Humours*, ſeems to evince as much as the *Galeniſts* pretend unto; *Since every thing is not produced out of every thing, but out of determinate matter*: 'tis not incongruous to imagine that in the *due conſtitution of the Blood* there is an *Analogical difference* of *Alimentary juyces* to make up good *Blood*, ſince there is ſuch a *diſcrepancy* in thoſe *depurated* from it; upon which the *Soul*, by the *innate temperament* of the parts *ſeparating*, doth ſo *operate* that its effects are *modified* by the nature of the *ſubject matter*: Hence that *variety* in the *taſtes* of *Urine*, which is *ſometimes* ſo *bitter* that *Gall* doth not exceed *it*: ſometimes *ſweet*; ſo that *Fonſeca* relates of a *Portugueſs* Peaſant, who by the *ſweetneſs of the Urine* would tell who were *infected with the Plague.*

Mabius ubi ſupra a.p.338.

Fonſeca de Excrement. c.de Urinis.

The *Gall* appeared in great variety to *Veſalius*:
'' *Longum ſane eſſet, ea que in quibuſdam tertiana &*
' *quartana laborantibus, & dein ſuſpendio aut capite*
' *plexis, in furiis & mania oppreſſit obſeſſis, in melancho-*
' *lia morbo effectis, ex variis febrium (quæ continuæ*
' *fuerunt, & rigorum & ſudorum inordinatos circuitus*
' *faciebant) generibus extinctis, fædo ictero, eoque va-*
' *rio vexatis, malo habitu diu preſſis, & dyſenteria cru-*
' *ciatis,*

Veſalius Examin. obſ. Fallop.p.191.

ciatis, ſubinde reperi, modo commemorare: Sive ſcilicet hic inſignem bilis nunc flammæ, nunc atramenti quo ſcribimus in modum atræ, ſive albicantis propemodum colorem (qui fere conterminas partes inficeat) ſive fluidam, aut luti modo, aut unguenti cujuſdam ex farinis & melle & terebinthina apparati ritu conſtantis ſubſtantiam, ſive varias calculorum effigies, ſive bilis veſiculæ molem inſtar duorum pugnorum ob contenta tumidam, ſive omnis bilis defectum, recenſerem. Quæ omnia me de hujus veſiculæ natura adhuc magis quam antea habent ſolicitum, As to the *Pancreatick juyce* its *variety* is no leſs *obſervable*: So for the *Phlegm*, and *Blood* it ſelf.

Regner. de Graeff de ſucco pancreatit. §. 65.

Having ſaid thus much in behalf of the *Ancients* againſt ſome *Dullmen* of this Age, who laugh at any one that mentions but thoſe *Humours*, I might proceed to demonſtrate *practically* their *ſeveral motions* in *diſeaſes*, and juſtifie the *Medicinal Documents* created thereon by *ſuch inſtances* as countenance thereunto: But the *digreſſion* would be *exceſſive*; I return therefore to the *principal Diſcourſe*, and ſhall from what hath been ſaid erect an *Hypotheſis* concerning *Plebotomy* which will *authenticate* the *received practiſe*, which is ſo *judiciouſly* and happily followed by all *prudent men*.

1. If it be true, that there is ſo *great a Quantity* of *Blood* in the body, as I have evinced, then may we very well ſuppoſe, that the *loſs of a few ounces* is no *great dammage* to the Patient.

2. If it be true, that ſo *great effuſions* of Blood have happened to ſeveral perſons

sons without any *subsequent prejudice*: If it be true, that *large Phlebotomy* even *usque ad Lipothymiam* hath been *successfully* practised; then is it evident that our *partite* and *diminute Phlebotomy* may be *safely* continued: and that *whatsoever ill effects* follow *thereupon*, the default is not to be ascribed to *Blood-letting*, but to the indiscretion of him that *ignorantly* made use of it, or the *unknown* idiosyncracy of the Patient, or the over-ruling *Providence* of God which disappoints frequently the most *rational* and *best Methods of curing*. *Quædam ejus sunt conditionis, ut effectum præstare debeant: quibusdam pro effectu est, omnia attentasse, ut proficerent. Si omnia fecit ut sanaret, peregit Medicus partes suas: etiam damnato reo, Oratori constat eloquentia officium, si omni arte usus sit.*

Seneca de benit. l. 7.

3. If it be true, that there is so great a *variety* and *discrepancy* in the *Blood*, then is there no *secure judgment* to be made of the

the *Blood* iſſuing out of the *vein*, either to the *continuing* or *ſtopping* its *Flux*: But the *Phyſician* is to proceed according to the *Rules of Art*; and accordingly as *they* direct him, may he *promote*, *ſtop*, or *repeat* the *evacuation*: A ſeeming *Cacochymy* in the *Blood* doth not impede *venæ-ſection*, nor call for *purging*, and *rectifying*: Nothing is *evil* that is *natural* to a man; but real *Cachochymy* or *redundance of Humours* offending Nature, this doth call for our *aſſiſtance*, and requires ſometimes *Phlebotomy*, and ſometimes other *Medicaments*.

4. If it be true, that *Sanguification* is an *Animal Action*, if it be true that the *Plaſtick form* is in being before the *Blood*, and produceth *it*, and the *whole Fabrick*, and *ſubſequent operations*; and that the *motion* of the *Heart* is proved by Doctor *Lower* to depend upon the *Nerves* during life: then is there no ſuch *ſtrict connexion* betwixt the *Soul*, *Life*,

Life, and *Blood*, as——*G. T.* doth fancy.

5. *If* it be true that the *Blood* doth continually *waſte* and *ſpend it ſelf*, in *Nutriment* and *Excrements*; then is it manifeſt not only that the *loſs of a little Blood* partitely taken away is not the *loſs of life*, or *prejudicial* thereunto. Neither doth it follow that the *loſs of Blood* in a *moderate quantity* is any imminution of the *vital Nectar:* it is neither the *chief reſidence* or *ſeat of the Soul*, nor in a *determinate quantity* requiſite to the *continuance of Life*, but comes under a *great latitude: It* abounds more in ſome ſeaſons of the year, and times, than at others: and why may not *Artiſts* imitate *Nature* in *diminiſhing* its redundance upon occaſion, as *ſhe* does? As long as he proceeds not to exhauſt *all*, or *too much:* The loſs is *eaſily* repaired upon *convaleſcence*, and the *qnantity* is more than can be governed by *Nature* in ſickneſs; 'tis but the obſervation of

of a *Geometrical proportion* in such a *Phlebotomist*. The same *Agent* will produce the same effects: if *Nature* be corroborated, and the vitiated *tonus* of the *concocting* and *distributing* vessels be amended, there is no fear of wanting a *new supply* proportionate to the exigence of the Patient. The *Blood* we take away is no other than what would be *expended* or exhausted *naturally* within a few hours, or dayes, as the *Staticks* shew: and it must needs be considering the *quantity* of *Chyle* which flows into the veins upon *eating* and *drinking*.

6. If it be true, not only that *Nature* doth thus *expend* in *transpiration* and *Excrements* as well as *Nourishment*, much of the *Blood*, and repairs her *defects* by a new *supply* (whereby *Life* is continued, not impaired) so as that the *melioration* of the *following Blood* is rather evident in his first years by his *growth*, *vigour*, *strength* and *intellectuals*: But also that She doth of her

Botallus de venæ sect. c. 15.

Hippocrat. sect. 3. Aphor. 27. 20.

her ſelf make *men* and *women* apt to *bleed* at *ſome times*, *ages*, and *ſeaſons* (which is known to all) then is not the *effuſion* of this *ſolar liquor* ſo *unnatural* a thing, nor ſo *homicidial* an Act, as 'tis repreſented. 'Twould ſeem a ſtrange *Law* that ſhould puniſh every *Boy* that breaks the *Head* or *Noſe* of another as a *Bronchotomiſt*, or *Cut-throat*.

If it be true, that *Nature* doth oftentimes *alleviate* even in the *beginning*, and in the end *cure Diſeaſes* by *ſpontaneous evacuations of Blood*, at the *Noſe*, and *Uterus*, by *vomiting* and *ſtool*, then a *Phyſician*, whoſe buſineſs it is to *imitate Nature* in her *beneficial Operations*, is ſufficiently *authoriſed* and *impowered* to practiſe *due Phlebotomy*, by the *beſt of Preſidents*.

Having premiſed *theſe Concluſions*, which are all either *proved* in the foregoing diſcourſe, or *evident* in themſelves to all underſtanding men: I ſhall proceed to give an account of the *Reaſons* why *Phyſicians* do ſo *frequently*, and in ſo *many Diſeaſes* practiſe *Blood-letting*;

ving; and thoſe deduced from its *variety of effects in Humane bodies*: For it is not a *ſingle Remedy* ſubſervient unto one *Indication*, or *End*, but conducing to *many*, and therefore made uſe of upon *ſeveral occaſions* to different intentions. *Utile eſt id remedium ad quamplurima, & vix poteſt in ullo magno morbo non eſſe aliquid, cujus gratia utile ſit.* *Valles.* Meth. med. l.4.c.2.

Before I come to *particulars*, it is neceſſary I tell you that in the *cure of all diſeaſes* Phyſicians propoſe unto themſelves ſundry conſiderations: they regard the *diſeaſe*, the *antecedent cauſes*, and the *ſymptomes* which *attend* or will *enſue* thereupon either *generally*, or in ſuch an *individual conſtitution*: they employ their cares to *prevent* ſome inconveniences, as well as to *redreſs* others. Some remedies they make uſe of becauſe they are *neceſſary*; of ſome, becauſe they are *beneficial*, yet may the diſeaſe ('tis granted) be cured *otherwiſe*, in caſe the Patient have a *reluctancy* thereto, or for ſome *private reaſons* the Phyſicians eſteem it fitting to alter their courſe. Upon this account 'tis aſſented unto, that many diſtempers *may be cured without Phlebotomy*, which yet are *ordinarily* cured with *it*, or may be ſo: And herein the *diſagreement of Phyſicians*, or *different procedures* are all according to their *Art*, nor is it denied but that *All of them may atchieve their ends by their ſeveral Methods.* So that it is a groſs *paralogiſme* for any one to conclude *this* or *that Phyſician* is miſtaken, or takes a wrong courſe, becauſe *another* takes or preſcribes a *different one.* All the Phyſicians in *Spain*, *France* and *Italy* do not bleed with *equal profuſeneſs:* In *Germany* and *England* ſome do practiſe more frequent *Phlebotomies*, than others do: and *neither of the parties* do erre, in caſe the other *remaining Method* be inviolately obſerved. It is in *humane bodies* as it is in the *body Politick*, where there is a *Method of ruling*, though it be carried on by *ſeveral* wayes

and means; and whilſt each *States-man* doth prudentially ſway the Government, procuring *peace* and *plenty* to the ſubject, his conduct, though it vary from that of his Predeceſſour, is not to be blamed. It is not to be doubted but that many *grievous diſtempers* are cured by *Nature*, without the uſe of any remedies at all: Yet will no *wiſe man* adventure his life on ſuch *incertainties*: 'tis not to be denied but ſome are cured with *fewer Remedies* than others are: But yet 'tis not *prudence* to put Nature upon *too great a ſtreſs*, or to account all means *unneceſſary* which are not *abſolutely requiſite*, or without which the *effect* may (though with *more difficulty*, and *hazard*) be brought to paſs. It lyeth upon the Phyſician therefore to purſue *all thoſe means* which may *ſecure* the life of his Patient, to *alleviate* the diſeaſe in its courſe by preventing all *troubleſome* and mitigating all *dangerous* ſymptomes, and to *facilitate* as well as haſten *his recovery*. It is not queſtioned but Patients *have been* and *may be* recovered of Feavers with *little* or no *blood-letting*; yet when I conſider the *great hazard* they run in *that courſe*, the *vexatious* and *perillous ſymptomes* which they languiſh under *longer* and with more *violence* than others, I cannot approve of the *practiſe*, nor think the *Phyſician* diſchargeth his *duty* and a *good conſcience* in ſo doing: *Extrema neceſſitas in moralibus, ut certum eſt, vocatur, quando eſt probabile periculum*: and the *Patient* doth offend againſt himſelf, if he refuſe to take a *befitting courſe* againſt dangers that *probably* are impending: and the *Phyſician* doth treſpaſs againſt *his neighbour*, if he do not propoſe and practiſe ſuch a courſe. ' I

Riolanus de circulat ſang. c. xx. Anthopograph. p. 585.

' cannot (to uſe the words of the incomparable *Riolanus*) I cannot without *pity* to the ſick, and ſome ' *reſentment* againſt the *Phyſician*, read in *Platerus*'s Ob- ' ſervations, how ſundry of his Patients were broyled ' and torrefied with *burning Feavers*, whom he never *let* ' *blood*. He doth relate of himſelf, how he was ſick of

Platerus Obſervat. l. 2.

a

a moſt *burning Feaver*, yet did he never ſo much as let himſelf blood therein, albeit that it were *requiſite* in thoſe caſes. Such are not obliged to their Doctors, but peculiarly to the *Divine Providence* for their recovery.

It was the *mature* conſideration of that tenderneſs wch is requiſite in *Phyſicians* towards their *Patients* which advanc'd the *preſent courſe of Phyſick* to its glory above all other *Methods*: it being endeared to our eſteem by all thoſe regards that repreſent it as *prudential*. It was not introduced by *chance*, or the *ſubtlety* of ſome perſons, but the *choice* of all, and ſo eſtabliſhed by the *Magiſtracy*, that to tranſgreſs againſt the *traditions of this Art*, was *criminal* in a *Phyſician*, even by *our Laws*. It may in *ſome caſes* ſeem to be *troubleſome* and *unpleaſant*: yet SAFETY requires *it*: It may ſeem *tedious* ſometimes by *multiplication of Medicines*; yet Prudence obligeth by *all thoſe means* to preſerve and ſecure life; and if the *omiſſion thereof* be *criminal* in a Phyſician (in caſe of any *ſiniſter accident*, why is not the practiſe laudable? Would Men but ſeriouſly conſider *How much danger they run*, and *How much more they ſuffer* upon the *negligence* or *indulgence* of a *Phyſician*, who leaves all to *Nature*, and adviſeth them to *wear out a diſtemper*, they would rather *hate*, than *love* ſuch a Man; and the apprehenſion they ſhould have for the unneceſſary jeopardy he put them on would extenuate *his credit* very much: The moſt *raſh* and *brutiſh* counſels may ſucceed well; but yet the moſt prudent are to be preferred.

Amonſt *Phyſitians* (I do not reckon the *Helmontians* as any) there is no doubt but a *Plethorick indiſpoſition* requires *Phlebotomy*; Nature being ſurcharged with *blood* forceth us thereunto, leaſt ſome vein ſhould break in the *Lungs*, or the Patient be ſtrangled with *that exceſs*: this is called *Plethora quoad vaſa*: when the veſſels are ſo full of blood, that there

is

is danger of their *breaking*, or that the *blood* ſhould *ſtagnate* in the *Heart*, *Lungs* or *Head*, there wanting *room* for its *motion:* or take ſome *inordinate courſe*, and ſo *ſtrangle* the Patient.

There is another *redundancy of Blood* which is called *Plethora quoad vires*, or ſuch a *plenitude of blood* as brings along with it no *apparent hazard* of breaking the *veſſels*, yet doth it *oppreſs Nature* ſo as thereby to become *redundant:* It is more than *ſhe* can bear in the *preſent juncture*; 'tis more than ſhe can *rule*, and it will ſuddenly fall into an *exorbitant motion*, to the detriment of ſome *principal part*, in caſe timely *prevention* be not uſed. In both theſe caſes (in which the *blood* is not ſuppoſed to be much *depraved* from its *natural eſtate*) all do allow of *Phlebotomy*, and if it be timely put in execution, *it may hinder the progreſs*; however *it expedites the cure* of the diſeaſe. In theſe caſes we conſider not only the *preſent plenitude*, but alſo the *future*, what may be in a few dayes, to the great *exaſperation* of the diſeaſe, and *peril* of the Patient: For it is poſſible that in the firſt beginnings of a diſeaſe there may be neither of theſe *plenitudes*, but they may enſue a little after: For when the *inſenſible tranſpiration* ſhall have been a while abated (as *inquietude*, *pain*, and *watching* will abate *it*) the *Blood* degenerates, and no longer continuing its uſual *depuration*, thoſe excrementitious particles which were lodged in the *habit of the body* and *pores* do remix with the *ſanguine maſs*, and become like ſo many *fermentative corpuſcles* agitating and *attenuating* the blood, ſo that whereas before there was no *plenitude*, now there is: that the *excrementitious particles* do contract a *fermenting heterogeneous* quality different from what they had in the *Blood* appears hence, that thoſe which *ſweat much* (as the *new-comers* in the *Indies*) their ſweat is *leſs noyſome* and *bilious* by far, than it is in thoſe that ſweat *more ſeldome:* Thus *Soot* is a *different body* from

Sanctor. Med. Static. ſect. 1. aphor. 41, 49. ſect. 4. aphor. 7, 8.

from any thing that is burned. Hence it is that those particles being *reimbibed* into the *blood* are so offensive to the *nervous parts*, and introduce a *lassitude*, as if the body were surcharged with a *plenitude*. Besides these *two cases* in which *Phlebotomy* seems to be *directly* indicated by a *Plethora* or *surcharge of blood*: It is practised in other cases by way of *revulsion* when the *Blood* and *intermixed Humours* flow into any *determinate part*, or are *fixed* there as in *Apoplexies*; *Squinancies*, and *Pleurisies*: for as upon *dissection* it is manifest, that in such diseases there is a *greater efflux of Blood* than upon other occasions, so it is evident by *long experience*, that *Phlebotomy* doth *alter its course*, and *draw back the blood* so as that sometimes after that the first *blood* hath run more *pure* and *defæcated*, the subsequent hath been *purulent*, as if the *conjunct* cause of the *Pleurisie* or *Squinancy* had been *evacuated* thereby. In reference to such *fluxes of the blood to determinate parts*, we usually consider what in *all probability* may happen, as well as what is at present *urging*: and therefore for *prevention thereof* we *let blood* upon great *contusions* and *wounds*. It is also practised by way of *derivation*, when we *let blood* near to the *affected part*, thereby to evacuate part of the *imparted* matter: Thus *Van der Heyden* did frequently let his Patients blood in the same *foot* for the *Gout*: Thus in a *Squinancy* to open the *Jugulars*, it is a *derivative Phlebotomy*. In all these cases all *Physicians* agree to the *received* practise: but in case that the *disease* be not meerly *sanguine*, but seem to arise rather from a *Cachochymy*, or *redundance of evil humours*, than any *plenitude*, or *exorbitant motion* of the *Blood*: here many *Physicians* cry up that Rule: That Plethorick Diseases require Phlebotomy, but those that arise from a Cachochymy require expurgation. Here they accumulate a multitude of *Arguments*; and undoubtedly, since *so great men* are of *that side*, it must needs

Sanctor. Med. Static. sect. 4. aphor. 10, 11.

Van der Heyden Synopsis discurs. disc. 2. de potu *frigido*.

needs be that *they have cured those diseases without Phlebotomy*. But the *contrary practise* hath so *many abettors* whose credit equalleth or exceeds that of the *others*; and *Experience* in a multitude of cases hath shewed the great efficacy of *Blood-letting* in a *Cachochymy* or *meer impurity* of the *Mass of Blood*: and so *prodigious* is the efficacy thereof in *promoting transpiration*, and *opening* all *the emunctory passages of the body*, in *preventing of putrefaction, and expediting of the concoction, and in refrigerating the whole habit*, that *Hippocrates* and *Galen* did resolve it in general, That whensoever any great Disease did seise upon any Person, if he were of Strength and Age to bear it, he ought to be let blood. The *Arabians* dissented from *this practise*, but *Massarias* (after *Jacchinus* and the *Florentine Academy*) did prudently *revive* it, and solidly defend the *Tenet*: and the *happy Cures* did so convince the World of the *truth* of their *Assertions*, that all *Italy* in a manner was presently reduced under them, and *France* and *Spain*; so that though they did, and do still in *Spain* and *Italy* retain *Avicen* to be read in their *Universities* as well as *Hippocrates*, yet herein they have abandoned the *Arabians*; and they which do adhear to that *old Maxime* of purging out the *evil humours*, when they abound, do also comply with the *Hippocratical* practise, and by new excuses accommodate *it* to their *principles*: So that as to *most diseases* 'tis agreed (though upon *different grounds*) what *may* or *must be done*. Few now are so *timorous* in bleeding as heretofore; and where that apprehension is still continued, the *Physicians* rather comply with the *prejudicate conceits* of the people, then act out of *Reason*. He that can doubt the strange effects of *bleeding*, notwithstanding the *concurrent judgment* of *Physicians*, let him either read over *Prosper Alpinus* concerning the *Physick* practised in *Ægypt* amongst the *Turks* (where *Phlebotomy* is the *principal*

and

and frequently the *ſole remedy*) or adviſe with any *Farrier*, and he will be ſatisfied that in a *Cachochymy* nothing is more *beneficial*, though it be particularly ſaid of *Beaſts*, that the Life or Soul is in their Blood. For my part I am ſufficiently convinced of the *ſolidity of their judgment* who do much uſe *Phlebotomy*, and I have frequently obſerved that the *beſt Medicaments have been ineffectual* till after *Phlebotomy*, and then they have *operated* to the *recovery* of thoſe Patients who found *no benefit* by them *before*: ſo that to *begin the cure* of moſt diſeaſes therewith is the moſt ready and certain way of *curing them*: and to make that *previous* to *purging*, is the direct courſe to *purge with utility*. 'Twas moſt *Oracularly* ſpoke by *Valleſius*. "*Facile conceſſerim venæ-ſectionem eſſe optimum omni-*
"*um auxiliorum quibus Medici utuntur. Eſt enim va-*
"*lentiſſimum, & maxime preſentaneum, & multiplex.*
"*Dico autem multiplex, quia & vacuans, & revellens, &*
"*refrigerans, & venas relaxans, & omnem tranſpiratum*
"*augens, quam ob cauſam (& eſt a Galeno valde cele-*
"*bratum) in nullo magno morbo non eſt opportunum, ſi*
vires ferunt, & puerilis ætas non obſtat.

So *Blondelus* could not with all his skill cure the Marqueſs of *Cœuvre* till he did bleed him) in a chronical terrible *dyſentery*: which he confeſſeth, though he writes againſt Phlebotomy in *Epidemical* dyſenteries. *Valles.* meth. med. l. 4. c. 2.

When I conſidered the ſtrange efficacy *of bloodletting* in ſeveral diſeaſes, and that the diſcovery of the *Circulation of Blood* had rendered moſt of the *Reaſons* which were *formerly* uſed to be more *inſignificant*, or *falſe*: I was not a little *ſurpriſed*. I obſerved that the *effects* were *ſuch* as did *exactly* correſpond with their *Hypotheſis*, and that the *practiſe* was not *faulty* or *vain*, though the *principles* were: neither ought any man to *quarrel* with or *laugh* at ſuch *Arguments* as ('tis certain) will *guide* a man rightly to his *utmoſt ends*. 'Tis a kind of *impertinency* that ſwayes this *Age*; for 'tis not ſo much a *Phyſicians* buſineſs to *talk*; but to *heal*. It was moſt judiciouſly ſaid long ago, "*Ac nihil iſtas* *C. Celſus* Me-
"*cogitationes ad Medicinam pertinere, eo quoque ſenſu-* dicin. in præf.
"*diſci, quod, qui diverſa de his ſenſerint, ad eundem ta-*

c men ſanitatem homines perduxerint. —— Itaque inge-
c nium & facundiam vincere: morbos autem non elo-
c quentia ſed remediis curari. Quæ ſiquis elinguis uſu
c diſcretà bene norit, hunc aliquanto majorem Medium
c futurum, quam ſi ſine uſu linguam ſuam excoluerit.
Neither did *Hippocrates* place any great *value* upon *Philoſophical curioſities*, and *Natural diſcourſes*, but eſteemed it very *well* in *Phyſicians* if they could demonſtrate by their *ſucceſs* the *ſolidity* of their judgment, Αἱτε τῷ ἐτοίμων τὴν τέχνην ἐπιδείξες, ἀς ἐκ τῷ ἔργων ἤδεσαν, ἢ ἐκ τῷ λόγων ἐπιδεικνύσαν· ὁ τὸ λέγειν καταμελετήσαντες, ἀλλὰ τὴν πίσιν τῷ πλήθει ἐξ ὧν ἂν ἔδωσαν δικαιοτέρην ἡγεύμενοι, ἢ ἐξ ὧν ἀκύσαι.

Hippocrat. de Arte. c. 23.

I *reſolved* with my ſelf, that if the *Circulation of blood and other modern diſcoveries taught us but the ſame practiſe we already followed. it was* uſeleſs; *If it contradicted it, it muſt be* falſe: I obſerved that it was the *great work* of the *wiſer Novelliſts* to accommodate the *new Theories* to an *old* and *true way of practiſe*; and perceiving that the *effects of Phlebotomy* were ſuch as the *Ancients* inſiſted on, I perplexed my ſelf in conſidering what there might be *therein* to produce ſo *different effects*: I abſtracted from *all common Principles*, and called to mind the Opinion of the *Methodiſts*, who were a judicious ſort of *Phyſicians*, and the moſt prevalent at *Rome* in *Galen's* dayes. They held that *Diſeaſes did not ariſe from peccant humours, ſince many lived, and lived long with Cachochymical bodies: and in diſeaſes if in the beginning a multitude of humours (and ſuch as Phyſicians aſcribe the diſeaſe unto) be evacuated by vomit, ſweat, or ſtool, yet the diſtemper continues, and becomes worſe and more dangerous by reaſon of ſuch evacuatians: As little did they regard the firſt qualities of heat and cold, ſiccity humidity, concluding them to have no immediate effect in producing diſeaſes, but as they varied the ſymmetry of all or any parts of the body: the grounds they went upon were ſuch as were deduced from that Philoſophy which makes Rarity and*

Denſity

Denſity the principles of all bodies; and they placed Health in ſuch a conformation of the body, and ſuch a conſiguration of particles as did beſt ſuit with its nature: they held that the intertexture of the minute particles of our bodies were ſuch as admitted of an eaſie alteration, the fabrick being ſo exquiſitely interwoven, not only in the ſolid veſſels, and parts, but a commenſuration of proroſities every where, the alteration of which texture of the body into a great laxity, or ſtreightneſs, and this change of the pores did they make the great cauſes of all Maladies, and the reſtoration of them to be the way to ſanity, and this they called μεταβύγκεισις & μεταπεφέσεισις, *or the variation of the texture and combination of Corpuſcles, in the ſymmetry whereof they placed Health, and in the aſymmetry or improportionate and incongruous ſtate whereof they placed all Sickneſs. It was their Tenet, that amongſt thoſe Remedies which did moſt alter the texture of the body from ſtreightneſs to laxiiy, the moſt powerful were* Phlebotomy, *and* Purging, *and that* their principal effects *were not meerly to evacuate ſuch or ſuch peccant Humours, but* in doing ſo *to create a* new Texture *and* configuration of Corpuſcles *in the whole Body, and therefore they held them to be General Medicaments, and of uſe in moſt great diſeaſes, ſince ſuch diſtempers were rather occaſioned by a ſtreightneſs than laxity of the pores, and even ſuch as were laxe* one way *(as Dyſenteries and Diarrhœas) might be accompanied with a ſtreightneſs in the habit of the body.* This *Hypotheſis* (for the further explication whereof I remit you unto *Proſper Alpinus*) having been of *great renown*, and moſt accommodated to the *courſe of life* by which the *Romans* (and ſince the *Turks* and others that follow not our *Phyſick*) did *preſerve their Health, and recover their Maladies*, did merit my regards:

Διὰ τὶ πρὸς τὴν τροφὴν οἱ πυρέξαντες ἀνορέκτως ἔχουσιν; ὅτι ἐν συμμετρίᾳ τινὶ ὄντι ὧν ἐν σώματι καὶ κοιλίᾳ πόρων; ἐν συμμετρίαν ἔυλογον ἔχ ὑγιῆ μένειν, ἢπερ διαστάντων ἐπιπλέον τῶν πόρων, ἢ μύοντων.
Caſſius in problem. 71.

They ſeldome uſed *purging*, imagining it not *fit* till the body was *prepar'd*, and humours *concoſted*. but they made much uſe of *vomits*.

gards: and I obſerved the *truth* of that part of *their Opinion*, which avows that *purging* and *bleeding have further effects* than meerly the *evacuation of Blood and other Humours:* that *they* had ſuch an influence upon the whole body as to reſtore and promote all the *natural evacuations* of the body by its *ſeveral emunctories* and *pores*; and that *Phlebotomy* did particularly incline to *ſweat*, promote *urine*, (and ſometimes inſtantly allay its *ſharpneſs*) and make the body *ſoluble*, ſo that upon *Phlebotomy* there needs no *antecedent Glyſter*:

Valles. method. medend. l. 4. c. 2.
Gregor. Horſtius Inſtit. Med. diſp. 18. Coron. de venæ ſect. qu. xi.

Any man that is converſant in *Phyſick* knows that ſuch *purges* as operate on the *blood*, promote *urine*, and *ſweat*, and *tranſpiration*, even during the *working*; for thoſe very *qualmes* the Patients feel are an effect of *Diaphoreſis*. *Lipothymia juvet: quia ſudorem & validam perſpirationem facit. Sanctor.* Med. Stat. ſect. 1. *Aph.* 98.

Neither is it convenient in a great *Cacochymy* to *purge* before *bleeding*; not ſo much for fear of *irritating the Humours*, but that the *purge* operating ſo as to *attenuate* and *alter* the whole *maſs of blood*, and promote ſecondarily all *natural evacuations*; without *preceding Phlebotomy* it is ſcarce *ſafe* (not ſecure) to *purge*, except in bodies the *laxity* of whoſe *texture* is eaſily reſtored, or with gentle *Medicaments:* for the *Humours* being powerfully wrought upon by the *ſtrong purges*, and inclined to be expurged by their *ſeveral emunctories*, and thoſe being either *defective*, or the *veins* and *arteries* too *full* to admit a greater *rarefaction* in the *maſs of blood* (which is requiſite to their *ſeparation* and *tranſpiration*) hereupon there happens a dangerour *Orgaſmus* or *turgency of humours* in the *ſick:* which *Phlebotomy* doth prevent. And 'tis I conceive in reference to *this alteration of texture* that *Hippocrates* ſaith, Τὰ σώματα χρὴ, ὅκῃ ἄν τις βούλεται καθαίρειν, ἔνερθα ποιέειν. I obſerved a *great congruity* betwixt the *Static obſervations* and thoſe of the *Methodiſts*; and that *Sanctorius* hath a multitude of *Aphoriſmes* which agree with them: *viz.* That *ſuch bodies as tranſpire well in the hotteſt weather, they are lighter, and not troubled with any vexatious heat. That nothing* pre-

Hippocrat. § 2. aphor. x.
Sanctor. ſect. 1. aphor. 104.
Id ibid. ſect. 2. aphor. 28.
§. 1. aph. 120.

vents

vents putrefaction like to a large transpiration, In fine, I did obſerve that it was the *general ſenſe* of *Phyſicians*, that *Phlebotomy* did draw the *Humours* from the *Centre* to the *Circumference*, and I had taken notice of it alwayes in my ſelf; even in the *Colick bilious*, when I was tired out with *pains*, *vomiting* and *want of ſleep* (when I took no *Laudanum*) and reduced to *extream debility* and *emaciation*, I determined in that forlorn caſe (having uſed all other means for ſeveral weeks) to *bleed* ſo long (yet *partitely*) as that I might be freed from a moſt *troubleſome pulſation* of the *deſcending Artery*, below the reins: I bled *eight ounces* at firſt, and found a *vextious heat* in the *whole habit* of my body: I repeated the *Phlebotomy* in the *afternoon*, and was very hot all night: thus I continued to bleed twice each day for three dayes, looſing above ſixty ounces, and then fell into *ſweats*, was eaſed totally in my *back*, and afterwards recovered with a more facile *Pareſis* in my *Armes* (and no *contracture*) then that diſeaſe commonly terminates in *there*. Theſe conſiderations made me think that there was ſome more *important effect* in *Phlebotomy* than the *evacuation*, *derivation* and *revulſion* of the *Blood* and other *Humours*; and that it muſt conſiſt in promoting that Statical *tranſpiration*: and I conceived that the *Blood* was in *perpetual motion*, and though *Motion* doth hinder *Fermentation*, yet I had obſerved that in Pipes at *Owburne Abby*, where the drink runs from the *Brew-houſe* to the *Cellar* (to be *tunned* up) the *Fermentation* continues ſo (eſpecially in the *ſtronger drink*) that the *Pipes* frequently break therewith, as rapid as the *motion* is: I did not imagine that the nature of the *Blood* was ſuch as to be exalted into one *Uniform liquor* reſembling *Wine*, (for ſuch a *liquor* would not be *liable to ſuch ſudden changes* and alterations *from one extream to another*) but that it was a *miſcellary of heterogeneous liquors* in a perpetual *digeſtive*

I did *hercin* follow *Galen*, and thoſe that repreſent *Phlebotomy* as a great Anodyne: and particularly *Citeſius* concerning the *Colick* in *Poictiers*.

ſtive fermentation and *depuration* by *halituous particles* ariſing from it (as in more *groſs* by the emunctories) which if the *conformation of the pores* and paſſages be ſuch as to give it *due vent*, all continues well: if they be *obſtructed* or *vitiated* then *ſeveral maladies* enſue, except timely *prevention* be uſed: I conceived that in *Phlebotomy* as the *Blood* iſſueth from the *vein*, ſo (as in the pouring out of other *liquors*) the *Air* comes in by the *orifice*, and mingling with the *Blood* produceth *as great*, or *greater effects* than in the *Lungs* when it mixeth there with the *Blood*, invigorating it in an *unexpreſſible way*, whence we *commonly* ſee that the *pulſe* grows *ſtronger* and *ſtronger* during the *bleeding*: and upon *this account* I think it may happen that bleeding with *Leeches* though *equal quantity* be taken away, oftentimes does harm, never *alleviates* ſo much as *Phlebotomy*: and ſuch perſons as by reaſon of their *tender habit of body* cannot bear a *violent tranſpiration*, ſwoon not by *bleeding in water*, (though otherwiſe they do) by reaſon that the *great effects* of the *Air* upon the *Blood* are impeded by the *ambient water*: the like happens in *Scarification* with *Cupping-glaſſes*; and in bleeding with *Leeches*. I did ſuppoſe that oftentimes in a *Plethora quoad vires*, tranſpiration being hindered by the change of the texture of the Body, the *not-exhaling* particles remix with the *Blood*, and there alſo happens a *ſubſidence of the veſſels*, and change of the *poroſities*, ſo that the *Fermentation* is is not only clogged with *morboſe particles* of ſeveral ſorts, but ſo hindered by the *ſubſidence* or compreſſion of the veſſels and *alteration of the pores*, as not to be able to *ferment* (for freedom of room is neceſſary to *Fermentation*) nor *tranſpire*, nor continue its *due courſe*, nor by reaſon of the charge of *poroſities* confer aliment *aright*, ſo that a *Plethora* ariſeth hereupon. But as ſoon as the *vein* is breathed, and the *Blood* (as in your common *water-pipes* when a *Pipe* is cut) acquires a more free

Kergerus de ferment ſect. 1 c. 9. & ſect. 2. c 8.
Williſ. de ferment. c. 6,

free paſſage *that way*, it preſently becomes more *rapid*, and its *motion alſo is accelerated* by the *fuliginous* exhalations haſtening to the *vent*, together with the *natural Fermentation* reſuſcitated, and ſo the *whole body* by a *natural coherence* and *dependance*, is not only *evacuated*, but *altered* in its *minute texture*, and *conformation*.

It is moſt evident that the *Blood* in the *Veins* and *Arteries* is conveyed as it were in *conduit-pipes*, the *Heart* being the great *Elaſtic Engine* which drives it, being fed by the *vena Cava*, and diſburthening it ſelf by the *Aorta*: though even the motion of the Heart depend upon a *Superiour influence* by its *Nerves*, which wherein it conſiſts and how derived from the *Brain* and *Soul*, is a thing to us incomprehenſible. I do ſuppoſe that the *Circulation* is continued and carried on principally by *Anaſtomoſes* betwixt the *Capillary veins* and *Arteries*, many whereof having been diſcovered by *Spigelius*, *Veſlingius* and others, the reſt may *well* be ſuppoſed: and perhaps in the coats of the *Veins* and *Arteries* there may be a certain *texture requiſite* whereby the *tranſpiration* is managed in order to the *ſafe continuance* of the *digeſtive fermentation* in the *Blood*, and the *nutrition* of the body. The impulſe of the *Heart*, together with the *pulſation*, is ſufficient to convey the *blood* to the leſſer *capillary Arteries*, and there though the *pulſe* be loſt (which yet a little *inflammation* in the *extremities* of the body will make ſenſible, and in ſome *Ladies*, as alſo in *Children*, the leaſt *preternatural heat*) yet it is impelled by the ſubſequent *blood* ſtill into the *veins*, and having acquired by the common *miſcele* in the *Heart* and the *digeſtive fermentation* (which naturally ariſeth in ſuch *heterogenious liquors*) an inclination to *expand* it ſelf, the *compreſſion* in the *Capillary veſſels* adds to its *celerity of motion* when the *larger veins* give liberty for it: the *Aiery corpuſcles* of ſeveral kinds (which are eaſie to be

This is agreeable to the *Hypotheſis* of the *Methodiſts*,

be discovered upon *burning*) by their *expansion*, and *contraction* adding much thereunto: Thus in *Water-engines* the narrowness of the *Pipes* do add to the *impetus* with which the *Water* issues forth: And I do conceive (by the *Phænomena* which daily appears in *practise*) that the *Animal heat in the Blood* actuating that *heterogeneous miscele*, and according to the *diversity of its parts* producing therein (with the help of its *fermentation*) a rarefaction of what is *aiery*, and, according to the *room* there is, a *liberty* or inclination to *expand* and *evaporate* themselves, this is the principal cause of the *continuance of the motion of the blood in the veins*, and of its *saliency* upon *Phlebotomy*. Thus upon *Scarification* there is no *salience* or *spurting out of the blood*, there being no room for such an *expansion*, or for the *Aiery halituous* parts (in which there is as great a *difference* as in those exhaling from the *terraqueous Globe*) to rush forward out of the *continued Arteries*, and together with themselves to protrude the *blood*: Upon *this account* the *Methodists* and old *Physicians* (as also the *Ægyptians*) where the *tender bodies* and *constitutions* of *Children* and *Women* or *Men* admit not of, or requireth that great relaxation of the *pores* and *texture* of the body, which a more robust and *firm habit* (wherein as the *natural resistance* in health is greater, so the *recess from it* in a bad estate is much greater) would be *cured by*, they use these *Scarifications*, and prefer them (most judiciously) to *Phlebotomy*.

This constitution of the *Body* doth evince the great *utility* of *Phlebotomy*, and best (as I suppose) explicates the *effects* thereof which we daily *experiment*. From hence not only is manifest how the *Body* is evacuated in a *Plethora*, but in case of Revulsion, and Derivation. It is manifest in *Aqueducts* and *Siphons*, that the *liquors* (though much differing in nature from the *Blood*, nor so inclined to *evaporate*) does

accelerate

accelerate their motion, and iſſue out ſo *rapidly* upon an *inciſion* or fracture in one of the Pipes, that a *leſſer* in ſuch a caſe will *deplete* the *greater*, notwithſtanding its *free* paſſage in its *own* entire *Canale*. Thus the moſt *learned* and *conſiderate* Phyſician, Sir *George Ent*, having obſerved firſt thus much. "*Videmus aquam per ſi-*
"*phones delatam, ſi vel minima rimula hiſcat, foras cum*
"*impetu prorumpere.* And, "*Sanguis per aortam in-*
"*greſſus, fluit porro quocunque permittitur, peræque*
"*ſurſum ac deorſum, quia motus continuus eſt: quemad-*
"*modum in canalibus aquam deferentibus contingit, in*
"*quibus, quocunque feruntur, aqua continuo pergit move-*
"*ri. Quare nugantur ſtrenue, qui protruſionem hujuſ-*
"*modi non niſi in recta linea, fieri poſſe arbitrantur.*
Apolog. pro circul. ſangu. ſect. 23. p. 62.

Id. ibid. p. 107, 108.

After this *He* explains the doctrine of **Revulſion** in this manner. "*Quæ poſtea de revulſionibus dicuntur,*
"*nullum nobis faceſſunt negotium. Tantundem enim*
"*ſanguinis a pedibus aſcendit per venas, quantum ad eoſ-*
"*dam delabitur per Arterias. Facto itaque vulnere in*
"*pectore, aut capite, revulſio inſtituitur (ſi modo tam*
"*longinqua inſtituenda ſit) in crure. Quia ſanguis*
"*alias quoquoverſum ruens, facto nunc in pede egreſſu,*
"*copioſius per deſcendentem ramum, procul a vulnere, de-*
"*labitur. Non enim arbitramur, ſanguinem æque cele-*
"*riter ſua ſponte per arteriam aut venam fluere, atque is*
"*ſecta earum aliquo effluit. Nec ſanguis ad læſum pe-*
"*ctus aut caput, per venam cavam impetu affluit, quia*
"*fluxus ille aperta inferius vena intercipitur.* I do acknowledge that the reading of **theſe paſſages** did firſt create in me the thoughts I now impart unto you: And *hereby* it is evident how the *Ancients* (with their large *Phlebotomies*) might *derive* even the *morbifick* matter, or *revell* it, though *impacted*. Our minute *Phlebotomies* do *ſeldom* produce ſuch an *effect*; for ſince it is not otherwiſe done, but by a *ſucceſſive depletion* out of the *Arteries*, it would ſeem neceſſary to extract *three* or *four pounds* of *Blood* to *effect* ſuch a matter:
Id. ibid. p. 179, 180.

Neither indeed is it *neceſſary:* albeit that I believe the moſt *ſpeedy cures* (but great *judgment* is requiſite in ſuch operations) were atchieved *thereby:* for though we do not retract the *Humour*, or *Blood* unto the place *where we Phlebotomiſe*, we do revell it from the place *whether it was flowing:* and the courſe of the *Blood* and *Humours* being diverted, the *Arteries* leading to the part affected or *depleted*, and the *Flux of Humors* (which was *by them*) is abated, their *tenſeneſs* there (which appears by their *pulſation* there where they did not *beat* before) is *relaxed*, and ſo becomes leſs opportune to extravaſate either the *Blood* or other *Humours*: whereupon *Nature* it ſelf *alone*, or with a *little help* of the Phyſician, doth *digeſt* and *diſſipate* the impacted matter. Whereupon if we add the *motion of reſtitution* in the parts affected, which is hereby facilitated, the great change in the *digeſtive fermentation of the Blood* (which is manifeſt by the *melioration* of the Blood which is ſeen in repeated *Phlebotomies*) and the *relaxation* of the *whole body* in order to the *tranſpiration* and other *depuration of the Blood* by its ſeveral *Glandules*, the *Kidneys*, *Liver*, *Guts*, the reaſon of thoſe *prodigious benefits* which Patients have had *of old*, and now under *our practiſe*, is manifeſt; nor do we want a *juſtification* for reiterating *Phlebotomy*, or exerciſing it in *different veins*, and *divers manners*.

I deſigned long ago to ſet aſide ſome *ſpare hours* to a further ſtudy of this *Hypotheſis*, and in order *thereunto* to acquaint my ſelf with the *Hydraulic Arts*; as alſo to examine the *truth* and *ſolidity* of the *Static Experiments*: (out of which this *texture* of the *Body*, the *digeſtive motion* of the Blood, its *change*, and *reſtitution*, is demonſtrable) and to enlarge *my proſpect* by a compariſon of the ſeveral *Methods* and *Medicaments* uſed

The alteration of the *texture of the body* is no leſs evident, out of *Dietetical* obſervations: of which I have made *many*, and did intend *once* to proſecute *far* theſe *inquiries*; as alſo the diſcovery *thereof* in *dead bodies*.

used by ſundry *Phyſicians* (both *Methodiſts* and others) in order to the *cure of diſeaſes*, and *preſervation of health*: But I muſt tell you that the *malice of my enimies* renders my LIFE and *Condition* ſo ill-aſſured; And the apprehenſions I have leaſt the Projects of Campanella are *powerfully* and *ſubtly* driven on in this *Age* (I am the more confirm'd in my *ſuſpicions*; in that my *Adverſaries* are moſt intent to *ruine me*, but not to *remove thoſe Umbrages*) together with the *imminent ſubverſion* of the Faculty of Phyſick by the toleration of Divines *to practiſe* (which is contrary to the *Eccleſiaſtical Canons*, and makes them irregular) the great incouragement of *Quack-ſalvers*, and Baconical Phyſicians: Theſe reflexions have ſo *diſcouraged me*, that I have no mind to *purſue thoſe ſtudies*, or to be *much concerned* for the *preſent* on *ſucceeding generation*: But could I ſee *Phyſick* regain its *luſtre*, the *Faculty* encouraged by ſuch *Acts of Parliament*, as our *Predeceſſors*, and *Forreign Potentates* have made, and your College advanced as the Proper and Supreme judicature *in reference to Medicine*, I would willingly imploy *all my leiſeure* in the improving of the *preſent ſtate of Medicine*, without ſubverting *Learning*, or diſparaging the *Ancients*, without the knowledge of *whoſe writings* 'tis impoſſible for any man to be excellent in Phyſick. Poets and *Comical Wits* owe more to their Birth, and need leſs of *induſtry*, *ſtudy* and *judgment*, than Phyſicians: The *knotty Staffe*, the *Serpent*, the *Pine-apple*, the *Dog*, the *Dragon*, the *Cock*, with which the *pourtraicture* of *Æſculapius* was beautified, were not *Symbols* and *Hieroglyphics* of a facile ſtudy: The *firſt Principle* that we are taught is, Ὁ βίος βραχύς, ἡ δὲ τέχνη μακρὴ, ὁ δὲ καιρὸς ὀξύς, ἡ δὲ πεῖρα σφαλερὴ, ἡ δὲ κρίσις χαλεπή. But now the reading of two or three *Books*, a *Comical Wit*, a Bacon-face, a *contempt*

I intend ſome time this Summer to write a diſcourſe concerning the *Unlawfulneſs of Divines to profeſſe Phyſick.*

Vide Meibomium in ſur. *Hippocrat.* c. 5. *Io. Laurent.* diſſert. de *Æſculapio.*

Χρὴ μὲν γὰρ, ὅσις μέλλει ἰητρικῆς ξύνεσιν ἀτρεκέως ἅρμοζεσθαι, τῶνδέ μιν ὄπιθολον γενέσθαι φύσιος διδασκαλίης, τόπῳ ἐωρυεός, παιδομαθίης, φιλοπονίης, χρόνῳ. *Hippocr.* lege. c. 2.

tempt of Antiquity, and a *pretence to novel Experiments* (which are *meer* excuſes for *Ignorance*, and *Indiſcretion*) are ſufficient *Qualifications*,

Notwithſtanding the *Melancholy* and *penſiveneſs* into which the *preſent poſture of Learning here in* England alwayes puts *me* into, when I reflect thereon : I will conſtrain my ſelf to proceed further, and examine the caſes of *Phlebotomy* in a Pleuriſie, the Small-pox, and Scurvey ; concerning all which *diſeaſes* as I ſhall debate what an Intelligent Practitioner may do, nay is oftentimes obliged to do in conſcience, and out of diſcharge of Duty to his Patient, ſo I will not juſtifie *any Action* of thoſe perſons who *underſtand nothing*, nor can *diſtinguiſh circumſtances* in particular caſes : A thouſand things are to be conſidered by him that would *practiſe Phyſick* exactly, the *preſent diſeaſe*, the *paſt condition of the Patient* in reference to *himſelf*, *his parents*, *his dyet*, *preceding diſtempers*, the *latter*, the more *remote*, the *conjunct* cauſes ; what *hinders*, what *promotes*, what *effects* the cure : What *will*, what *may happen* in the diſeaſe, what *will* or *may* enſue upon *recovery* : In all theſe caſes, ſince he hath not a *ſenſible* and *eaſie knowledge* thereof, but muſt proceed upon Conjecture, *you* underſtand well *How great a comprehenſion of affairs*, and *how much in each caſe, he muſt inquire into*, who will diſcharge *well* the duty of a *Phyſician*. It was prudently ſaid of the incomparable *Ariſtotle* (the *meaneſt* of whoſe Works deſerves to be *read* above all that the *Novel Experimentators* have publiſhed ; if it were but for the *wiſe Apothegmes* therein : for Civil Society is the grand work of this Life ; and that is more *uſeful*, which qualifieth us *thereunto*, then what makes us admirable Mouſe-trap-makers !) " " *Phyſicians*, ſaith he, *do not cure*
Ariſtot. Metap. lib. 1. c. 1. ' *man in general, except it be by accident, but* Cullias, *or* ' Socrates, *or ſome other individual perſon. Hence even*

a man that is a ſpeculative Artiſt (how much more thoſe that are neither *ſpeculative*, nor *Empirics?*) *may be deceived in the application of general rules to ſingular caſes, and ſo may miſtake:* He tells us that *it is not for the moſt dexterous railers, or witty Sophiſters, to judge of State matters, nor yet for any man to direct therein, who hath not ſerved an Apprenticeſhip in the* Miniſtry of State: *for neither in Phyſick, doth the knowledge of a common* Praxis *accompliſh a man thereunto:* ταῦτα δὲ τοῖς μὲν ἐμπείροις ὠφέλιμα ἔιναι δοκεῖ τοῖς δ' ἀνεπισήμοσιν, ἀχρεῖα. What is it to the purpoſe, if they learn a multitude of *Knick-knacks*, and have an infinite of *Conundrums* in their Heads, if they know not what appertains to Practiſe? Theſe narrow-ſighted *Verulamians* may recommend *themſelves* by ſucceſs *in a few*; the Grave may *conceal*, or a ſtrong Nature amend their defaults; but they are nevertheleſs ignorant. In a *calm* many can ſteer a *ſhip*, whoſe *imbecillity of judgment* ſinks it in a *ſtorm*.

Ethicor. l.x. c.9.

ἐγὼ δὲ τῶν ἰητρῶν μὴ ὅσοι τινὶ εἰρέσθαι σοφιστῇ, ἢ ἰητρῷ, ἢ γέγραπται περὶ φύσιος, ἥκιστα νομίζω τῇ ἰητρικῇ τέχνῃ προσήκειν, ἢ τῇ γραφικῇ.

Ἐπεὶ οἱ πολλοί γε τῶν ἰητρῶν ταῦτά μοι δοκέουσι τοῖς κακοῖσι κυβερνήταις πάσχειν· καὶ γὰρ ἐκεῖνοι ὅταν ἐν γαλήνῃ κυβερνῶντες ἁμαρτάνωσιν, οὐ καταφανέες εἰσὶν ὅταν δὲ αὐλὸς καταχῇ ἄνεμός τε μέγας καὶ χειμών, φανερῶς ἤδη πᾶσιν ἀνθρώποισι δι' ἀγνωσίην καὶ ἁμαρτίην δῆλοί εἰσιν ἀπολέσαντες τὴν ναῦν ὥστω δὴ καὶ οἱ κακοί τε καὶ πλεῖσοι ἰητροὶ, ὅταν μὴ θεραπεύσωσιν ἀνθρώπους μηδὲν δεινὸν ἔχοντας, ἐς οὓς ἂν τις καὶ τὰ μέγιστα ἁμαρτάνων οὐδὲν δεινὸν ἐργάσαιτο πολλὰ δὲ τὰ τοιαῦτα νοσήματα καὶ πολὺ πλέον τῶν δεινῶν ἀνθρώποισι συμβαίνει· Ἐν μὲν δὴ τοῖσι τοιούτοισιν ἁμαρτάνοντες οὐ καταφανέες εἰσὶ τοῖσιν ἰδιώτῃσιν· ὁκόταν δὲ τύχωσι μεγάλῳ τε καὶ ἰσχυρῷ καὶ ἐπισφαλεῖ νοσήματι, τότε σφέων τὰ ἁμαρτήματα καὶ ἡ τέχνη πᾶσι καταφανὴς ἐστι.

Hippocr. de veter medicin. c. 17.

I have already ſpoken concerning *Phlebotomy* in the Plague: In a Pleuriſie 'tis no leſs evident that *Phyſicians* are divided in their *judgments*. To begin with

with the *true ſtate* of the *Queſtion*: This is more than this *Baconical* Philoſopher did ever think upon; for he without *any diſtinction* derives the **uſefulneſs of Phlebotomy in a Pleuriſie.** ‘‘ *If thou beeſt unſa-*
‘ *tisfied whether* opening a vein *as it is indicated from*
‘ *Evacuation, or Revulſion,* be a competent ſufficient
‘ Remedy *for the cure of a* Pleuriſie, *or any high Feaver;*
‘ *thou ſhalt find in this ſhort Tract a Reſolution in* a Ne-
‘ gative ſenſe, *grounded on* Reaſon, Authority, *but eſpe-*
‘ *cially that which is the ſum of all*, Matter of Fact *de-*
‘ *livered according to what Experiments are paſt, offered*
‘ *to be made good for the future.*——Thus he beſpeaks his *Reader* in the *Preface*: and a little after he aſſures him, that ‘‘ *He is able to reſolve any one that is capa-*
‘ *ble, that the moſt* Plethorick body *taken with a Feaver,*
‘ *or any one* Cachochymic *afflicted with a* Pleuriſie *may*
‘ *be cured without the Lancet more* ſpeedily *and ſafely*
‘ *than by uſing the ſame.*——Though I cannot imagine——*G. T.* to be good at **reſolving Controverſies in Phyſick**, yet ſuch is his *impudence*, that I will not refuſe him the Title of **Doctor Reſolutus**: I have read over *his Book* with ſome attention, but I could not find any *Pretenſions* in it to **Authority**, nor any *Experimental Hiſtories* related: All amounts to this——**G. Thomſon** ſaith, ‘‘ *It is not good to bleed*
p. 126. ‘ *in a Pleuriſie.* And——**G. Thomſon** avows that
‘‘ *'Tis verified by obſervation, they who recover by this*
‘ Apoſpaſtick means *do for the moſt part find a great*
‘ *debility ſucceeding, are incident to Empyemas, Con-*
‘ *ſumptions, and prove to relapſe into the like condition*
‘ *again. On the other ſide, thoſe who riſe from their*
‘ *ſick Beds, reſtored by vertue of* adæquate Remedies,
‘ *are* **ſecured** *from the forementioned diſcommodities.*
‘ *Aſſuredly of all thoſe* Pleuriticks, *I have handled above*
‘ *theſe* half-ſcore years, *I have not known one after their*
‘ *evaſion procured by* a legitimate form of Phyſick, *ei-*
‘ *ther live craſie, fall into ſecondary calamities, or reci-*
‘ *divate*

divate into a Languour of the like Idæa.——This is that *irrefragable Argument* drawn from past Experiments, which is the Sum of all Proofs, and must satisfie all that are capable: which it is possible *it may do*, if there be persons in the World that are capable of being resolved hereby: But impossible Suppositions are equipollent to Negations: Assuredly either this *Age* affords *no such Men*, or they are a Company of Fools: Who else will give credit to the *bare assertions* of——*G. T?* He should have done like his Brother *Odowde*, printed an account of *Cures*, though they had been all *false* and fictitious: but as the case is, *he* neither cites so much as *Van Helmont*, and the Peasant that cured *Pleurisies* with *stoned-horse-dung*; but is himself Author and Witness: Thus he *bristles* most Porcupine like.

Se *jaculo*, sese *pharetra*, sese *utitur arcu.*

This is all I reply to his Authority, and Experiments: His *pretences* to *Reason* are no less gain. He sayes, That *when we bleed any Pleuritick, there is no* streight immediate Revulsion *intended from the* part affected *to* the orifice——which is a most TRUE, and Bacon-like Aphorisme! for We never thought that the *Revulsion* could be *streight*, whereas the *line* in which 'tis made is crooked. If we *Phlebotomise* in the *Arm*, (whether it be on the *same side*, or on the *contrary*) or in the *foot*, none was ever so besotted as to avow the *Revulsion* to be streight, though he held not the *Circulation of the Blood*: But such as hold that the *Revulsion* is made thus, in that the *Veins draw from the Arteries*, and so as in *Siphons*, divert the stream, they cannot hold *any thing like it*: nor that the *Blood* impacted or flowing was immediately revelled, and *drawn back*: But I am apt to think that some *upon large* and *repeated Phlebotomies* may have

p. 126.

have drawn some of the *purulent* and *degenerate* blood out of the veins of the *Arm*; in which there is no more of *impossibility*, than that it should be carried by the *emulgent Arteries* into the *Kidneys*, and discharged by *urine*: which last is avowed to have been done. I do not know that such *large Phlebotomies* in a *Pleurisie* are practised by the *English Physicians*; though I think there is not so much of *Reason*, as *vulgar prejudice* to oppose the *thing*, when the *Doctor* is an *understanding Man*. For why may not we in *England* bear that which they do in *Holland*? there *Heurnius* took away above *four pounds of blood* from one *Plethorical* Pleuritic at one time, in a *dangerous Pleurisie*, and recovered him when all others gave him up *for dead*. I believe there may be *some* amongst us that repeat *Phlebotomy* too often; but I am confident the *generality* erre in taking away too little at *one time*, in the beginning of *Pleurisies* and *Feavers*.

See *Schenckius* obs. l. 2. de pleurit. *Prosper Alpin.* Medic. meth. l. 7. c. xi.

I. Heurnius apud *Schenckius* lib. 2. de pleurit.

His next Argument is, that the Cure by *Phlebotomy* is accidental *only and uncertain: sometimes in the beginning they do thereby suppress the disease, and as it were crush it, but it is a contingent, not at all Rhizotomous Cure, which ought to be performed by those things which are* Ῥιζόω, *dulcifying the acid Latex, carrying it off through all its emunctories, rectifying the stomach, and mortifying the malignity.*——That all *Pleuritics* shall be cured by *Phlebotomy*, is a thing no wise man will undertake for: As little will any man *promise* to cure a *Pleurisie* by sole *Phlebotomy*, without giving the Patient any *Expectorating*, or *Sudorifick Medicaments*, or other *Potions*; besides the Powders of *Pikes-jaws*, *Boares-teeth*, *Crabs-eyes*, &c. which correct the *acidity* of the *Latex*; if there be any such thing.

p. 126. I would willingly know of this *Helmontian*, whether it be a *Rhizotomous cure*, when Nature doth put a period to a disease, by an *eruption of blood at the nose*? Here is no *dulcification of the acid Latex*; no *rectification of the stomach*; and no other *mortification of the malignity*.

But

But to ſhew the *folly* and *impertinence* of this—— *G. T.* There are ſeveral ſorts of *Pleuriſies*, in many whereof no *Galenical* Practitioner is obliged to *Phlebotomy* at all; though in ſome ſuch caſes it be left to *their diſcretion* either to uſe it, or omit it; as in *Baſtard Pleuriſies*. Of thoſe which have the Character of true *Pleuriſies*, ſome are occaſioned by the Worms: in which—— *G. T.* cannot imagine that any man would rely on *Phlebotomy*. There are alſo *Peſtilential Pleuriſies*, wherein the effects of *Phlebotomy* are as *uncertain* as in the *Peſt* it ſelf: *Geſner* (in his *Epiſtles* ſomewhere) ſpeaks of *ſuch* a one, in which all died that were *blooded*: So doth *Bartoletus*, and *Wierus*. There was alſo an *Epidemical* Diſeaſe in *Friuli*, which *Vincentius Baronius* firſt named a *Pleuripneumony*, in which the *Pleura* and *Lungs* were both affected (where the ſeat of a *Pleuriſie* is, is doubtful amongſt Phyſicians) but yet ſo, that though they had *all the ſigns* of a common *Pleuriſie* at the beginning, yet did they never come to *ſuppuration*, but were cured by *Phlebotomy*, immediately upon the adminiſtration *whereof* they were relieved, and with the help of acceſſional Medicaments expectorated *bilious* and *pituitous* ſpittle, and ſo recovered. As to thoſe which are confeſſed to be Pleuriſies, it is to be obſerved, that neither can all *perſons*, nor all places bear *Phlebotomy* therein, and in ſuch caſes no wiſe *Phyſician* will adminiſter it: the *qualities* of the *Climate*, and *individual conſtitutions* or *debilities*, are circumſtances he will alwayes regard. It is granted that ſome *Pleuriſies* are ſo mild, and attended with ſuch favourable *ſymptomes*, of ſo good a *prognoſtick*, that they do not need *Phlebotomy*: " *In* " *moderata pleuritide, in qua videlicet parum urgent re-* " *ſpiratio, tuſſis, dolor, febris, Phlebotomia inutilis eſt,* " *aut certe non neceſſaria. Aliis enim levioribus auxi-* " *liis curari poteſt, quomodo is a Galeno percuratus, qui* " *in*

Quercetan. Rediviuus t. 3. p 102. *Baptiſt. Codronch.* de morb. vulgar. c. xii. and *Bartoletus* de diffic. reſpir. l. 5. c. 4. *Bartoletus* de difficil. reſpir. l. 5. c. 4. *Wierus* obſer. l. 1. de Epid. pleuritide.

Vincent. Baronius de pleuripneumon. l. 1, c. 1.

Caſtellus de abuſu Phlebotom. p. 87.

Gabelchoverus centur. 2. cur 92. in Scholio *Hollerius* apud *Iacobium* in *Coac.* l. 7. ſect. 2. ſect. 18. vide etiam Iacob. in *Coac.* l. 5. ſect. 2. §. 26.

Galenus comment. 3 in l. 6. Epidem. But *Riolanus* doth blame *Galen* as violating his *own Rules* hereby. *De circulat. sang.* c. xx.

Hippocrat. l. 2. Aphor. 19.

c *in levi pleuritide sanguinem expuebat; & plurimi visi*
c *sunt a nobis & aliis medicis citra ejusmodi auxilium*
c *convaluisse.* But although I am ready to grant that in *such cases* Phlebotomy may be omitted, and yet the Patient escape: yet I can hardly commend the *prudence* of such *Physicians* as do omit it; For, since a Pleurisie is alwayes an acute Disease, (in *such* our *Prognosticks* are not *certain*) and the *parts affected* such as are of *greatest importance*, and *equal tenderness*; since the *disease* is frequently so fallacious, that amidst the most hopeful signes, and when we may justly expect its *happy termination*, even then most *direful symptomes* break out, and render the case deplorable. [*Nam aliquando ubi antea signa omnia salutem prænuntiaverint, crisis tempore, quæ fere fit ad septimum, aut alium diem criticum, vehementer Pleuritis exacerbatur, symptomata omnia increscunt, tum nihil movendum est: sed omnia naturæ committenda sunt.*] Since the *Patients* condition is such, I do not see how any *Physician* can answer it well to his *Conscience*, or the *Rules of Art* (I am sure 'tis *criminal* in *Italy*) if he forbear to take *some Blood* (albeit not so much as otherwise he would) away from him: the damage is *inconsiderable*, but the *hazard* otherwise *so great*, that no *prudence* can well *contemn it.*

Holler. de morb. intern. l. 1. c. 26. *De pleuritide.*

Zacchias Qu. Medico-legal. l. 9. consil. 40. sect. 4.

I do further confess that *many* have been recovered out of very *dangerous Pleurisies* without *Phlebotomy*: as he in *Alexius Pedemontius* with the *pectoral drink*, and perhaps that other by the eating of an *Apple* roasted with *Olibanum* in it: whereof *Quercetan* makes mention; who also speaks of another *Powder* given in the water of *Corn-poppies*, with which *he* cured many *Pleuritics*, administring nothing else *inwardly*, or *outwardly*. There is a Case in *Valleriola* (which yet he rather accounts *miraculous*, than to be *presumed* upon again) of a *young Woman* eight months gone with child,

Alexius Pedemont. de secr. l. 1. p. 51, 49. *River.* cent. 4. obs. 88. *Quercetan.* *Redivivus* c. 3. p. 103.

child; that fell into a *Pleuriſie on the left ſide*, with a violent Feaver, a troubleſome Cough, and difficulty of breathing. " *Uno die miraculo curata, non miſſo ſanguine, non cucurbitulis adhibitis, ullave purgatione, duobus tantum illi præſcriptis Clyſteribus emollientibus, ſputo eodem die cruento plurimo & cum facilitate emanante: ſudore interim copioſo ſub noctem ſecuto, poſtride ſana evaſit, abſque dolore, abſque febre (quæ tamen vehementiſſima in ea erat) & abſque ullis ſymptomatis relictis, a morbo integre curata remanſit.*

Fr. *Valleriole* obſ. Medic. l. 4. obſ. 1.

Neither will I deny that grievous Pleuriſies have been cured by Sudoxifics: this *Method* was practiſed by *Lazarus Meyſſonnierius*, and that for *this reaſon:* He ſayes the common People about *Lyons* in *France* call a Pleuriſie *Lou-ſan-prei*, or *congealed Blood:* and that *Platerus* (and others) upon *diſſection* have found no other default in the *Pleura*, than that there hath been a *livid ſpot* thereon, which he looks upon as a *concretion* of *ſalino-ſerous Blood*; conſidering this, and that the *Critical termination of Pleuriſies* is by Sweat, he perfected his Cures by diſcuſſing the coagulated *blood* by Sweat, and that ſometimes ſo as not to uſe the other ſubſidiary Remedies of *Phlebotomy*, or *Lenitives*.

Lazarus Meſſonnierius doctr. nov. febr. Exerc. 3. p. 41, 42.

ἀπο-θανόντων αὐτέων, ἢ πλευρὴ πλείη ἐυείσκεται, ἴκελον πλινθῇ. *Hippocrat.* de victu in acut. l. 1. ſect. 8.

" *Imo non adhibitis Medicorum ignorantia, vel adſtantium negligentia convenientibus remediis aliis, in vera Pleuritide ſudorem excitavimus diebus decretoriis 7. & 14. quod nobis feliciter ceſſit, præſertim in adoleſcente prædivite, qui tempeſtiva phlebotomia omiſſa ad mortem properabat, ille ſiquidem ſeptima morbi propinato a nobis vocatis* potu hydrotico *intra biduum ſanus in publicum prodiit: vocatur ille* Serre, *& Burgundii apud Delphinates taurica vivit-* I muſt take notice here that our *Author* diſlikes not, but complains of the omiſſion of mature *Phlebotomy*; notwithſtanding that he *compleated* his Cures by ſweating: Neither is

this way of *his* condemned by *Valleſius*, whoſe words are theſe. "*Hæc* [apud Hippocratem ibi] *ratio* "*curandi pleuriticos, potionibus vehementer diſcutientibus, non admodum in uſu eſt noſtris Medicis, quippe qui* "*poſt miſſionem ſanguinis, & inunctiones & moventia* "*ſputa, & quæ ad has intentiones pertinent, niſi excreent* "*ægroti, deſperant ſervari poſſe, ad nullam aliam tranſe-* "*untes curationem. Scio tamen quendam, cui homo qui-* "*dam vulgaris neſcio quid hujuſmodi in potu dedit, co-* "*pioſiſſimo ſudore excitato, ſervatum eſſe brevi, & tho-* "*racem laxatum, & ſputum redditum facile, cum ſepti-* "*ma jam dies eſſet, & nihil cæpiſſet excreare, & pene* "*jam ſtrangulari præ reſpirandi difficultate periclitare-* "*tur. Idiotæ etiam qui Emperice curationem quorun-* "*dam aggrediuntur, exudatoriis curant pleuritides, ſæpe* "*cum optimo ſucceſſu: atqui profecto ratione hoc non* "*caret.* Of the like Cures, without *Phlebotomy*, or other Medicaments beſides what *expectorate*, (and perhaps a *pectoral liniment*, or *fomentation*) you may ſee in the excellent *Rulandus* cent. 1. cur. 59, 75. cent. 6. cur. 76. And *Gabelchoverus* cent. 3. cur. 49.

Valles. in *Hippocrat.* de victu in morb. acut. l. 4. p. 197

Neither is it to be denied, but that *Rulandus* frequently cured *Pleuriſies* (even the moſt deſperate) by vomits of *Aqua Benedicta*, or the *Emetic infuſion*, and *pectoral drinks*, without ever proceeding to *Pectoral liniments*, or *Phlebotomy*, except there did appear further occaſion *thereof* after the *vomit*. So *Cent.* 1. *cur.* 41, 81. *Cent.* 4. *cur.* 26. *Cent.* 6. *cur.* 13. *Cent.* 7. *cur.* 42. But when there ſeemed occaſion for *Phlebotomy*, after the *aforeſaid vomit*, then he uſeth it. *Cent.* 1. *cur.* 35, 36, 57, 62, 65, 68. *Cent.* 4. *cur.* 16. *Cent.* 5. *cur.* 53, 56, 57. The like courſe was practiſed by *Hartman*, who begins with the ſame *vomit*; and if occaſion require deſcends to *Phlebotomy*, and *Diaphoretics*, *Linimcnts*, and expectorating Medicaments. In *Plethorick bodies*, doth

Hartman. praxis chym. de pleurit. p. 133. edit. Genevens.

doth *Hartman* bleed before he *vomit* his Patients. Sometimes *Rulandus* doth *vomit* them with his *Aqua benedicta, bleed*, and *sweat them for several dayes* till they be well; using other *pectoral Medicaments*: as *Cent. 6. cur.* 18. Sometimes he *sweats* and *vomits* them at once with the powder of *Asarabacca-roots*, and a *Decoction* or Water of *Carduus benedictus*, and doth not *Phlebotomise*: as *Cent.* 5. *cur.* 6. Concerning the use of his *Aqua benedicta*, or the *Emetick infusion* in *Pleurisies* he avows it to be Experimentum optimum contra hunc morbum, et omnium aliorum Medicamentorum certissimum. *Cent.* 1. *cur*, 66. I must profess I have *generally* guided *my practise* in the Countrey by the Presidents of *Rulandus*, proceeding to *Phlebotomy* after *vomiting*, if the pain were not *mitigated* and *expectoration facile*; but *if it were*, I acquiesced in *topicks*, and *expectoration*, and *sweating*. Where the *Patient* could, or would not *vomit*, I followed the *Presidents* of the said *Rulandus*, for to purge with the decoction of *Senna*, *Agaric* and some *pectoral additions*; and then to *expectorate*, and *sweat* the *sick*, not *bleeding* except occasion required it, and then I either *premised*, or used it *subsequently*, as I saw cause: thus Rulandus *Cent.* 5. *cur.* 36,64. for which procedure you may see his *Reasons* added *Cent.* 7. *cur.* 20. And the practise of Gabelchoverus *Cent.* 1. *cur.* 11 *Cent.* 2. *cur.* 23. But *Gabelchoverus* in his *Scholium* here doth not allow of so *strong purges* as *Rulandus* sometimes makes use of, and defends by the *Authority* of *Hippocrates*, who did use *Peplium* and *Hellebore* in such *Pleurisies*, as the pain descended to the *Hypochondria*, and did not *ascend* to the *Omoplate*: But *Rulandus* doth not regard *that* distinction, nor *Gabelchover*, nor many others. The case of the *Wife* of *Ludovicus Panizza* doth deserve to be set down here.

Ludovicus

Ludovicus Paniza, Mantuanus, in Apologia Commentarii *de parca evacuatione in gravium morborum principiis a materia multa & mala & non furiosa pedetentim facienda.* cap. 6. fol. 59. col. 1.

" *Præterea quid sensui respondebimus? quod anno*
" 1554. *mea conjuge pleuritide correpta, ea suum annum*
" 72. *agente, imbecillis naturæ, melancholicæ temperatu-*
" *ræ, sanguine & carne exuta, dolore ad spatulam as-*
" *cendente. Eam secundo mobi die, non cum Phlebotomia,*
" *sed cum Pharmaco purgavimus, quod summa cum tran-*
" *quillitate subduxit, deinde subtili cum diæta, & co-*
" *quentibus, & sputum facilitantibus (ut par est in hu-*
" *jusmodi morbis) usque ad septimam sic procedentes,*
" *qua transacta, de Phlebotomia memores, sanguinis &*
" *carnis privatione, ætate, & ægra reluctante, eam di-*
" *missimus, atque ad id fælicissimum purgatorium Medi-*
" *camentum rursus devenimus, a quo post* XIV. *diem sal-*
" *vata fuit,*

It is further to be taken notice of, that sometimes Pleurisies have been cured without *Phlebotomy, purging*, or *vomiting*, or *bleeding*; by *Liniments* and *expectorating Medicoments*: as in Gabelchoverus *Cent.* 1. *cur.* 3. *Cent.* 2. *cur.* 93, 98, 99.

But to oppose——*G. T.* directly: sometimes Pleurisies have been cured by *Phlebotomy* alone and *pectoral Medicaments*: as in Rulandus *Cent.* 7. *cur.* 13, 14. *Cent.* 10. *cur.* 49. Gabelchoverus *Cent.* 3. *cur.* 7. Sometimes by *Phlebotomy*, and *sweating*: as in Rulandus *Cent.* 6. *cur.* 60.

I

I have hitherto made uſe of *theſe Authors*, becauſe they were moſt *eminent Practitioners*, and particularly famed for their *Cures* in *that diſeaſe*: and it is manifeſt *hereby*, that *Phyſicians* are not *bound up to one method* therein. Neither indeed *can* they be in *any diſeaſe*: for in *ſome years*, and in *ſome ages*, and *perſons*, and in *ſome circumſtances*, they are *forced* to recede from their *uſual courſes*; and ſometimes the *mildneſs of a diſtemper is ſuch*, that it requires not *all their addreſs*, thoſe *Methods* which are ſet down in our *praxes*.

I now come to give an account of the moſt *common* and *received Method* of curing *Pleuriſies* amongſt *Phyſicians*; and to ſhew with *how much reaſon* they practiſe *Phlebotomy* therein. There is not *any diſeaſe* whereof *Hippocrates* did take ſo particular care in relating its *Diagnoſtics*, *Prognoſtics*, and *Cure*, as a Pleuriſie, as is evident by what *he* hath written in his Books *De victu in morbis acutis*; and *De morbis*, beſides what he hath ſet down occaſionally in his other Works: It is an *Acute Feaver*, finiſhing its courſe in *ſeven*, *nine*, *eleven*, or *fourteen dayes*; though it hath happened (as in the caſe of *Anaxion*) that it extends its period to *thirty four dayes*. It is attended alwayes with *troubleſome*, oftentimes with *dangerous* ſymptomes. A violent Cough, difficulty of breathing, pricking pains and Stitches in the ſides: theſe are the *Pathognomonical* ſigns of *this Feaver*. Though the part affected ſeem *principally* to be the *Pleura* or *coſtall membrane*, yet are the *Lungs* attacqued by this *diſeaſe* (and frequently it hath been found that the ſeat of the *Pleuriſie* is rather in *them* than in the *Pleura*; as the followers of *Petronius* do demonſtrate) and their *fabrick* is ſo *tender*, that it is in great danger to be *putrified* or *corroded* in this diſtemper, by the *ſharpneſs* or other *evil qualities* of the *ſputaminous matter*.

Hippocrat. aphor. 8. § 4. cum notis *Valleſii*.

Hippocrat. Epidem. § 3. l. 3. p. 309, 310, 311, 312. cum notis *Valleſii*.

Hippocr. Coac. Prænot. l. 5. sect. 2, sect. 27, cum notis Iacotii.

matter. Besides, it is a very *fallacious* disease, and frequently after hopes of a recovery by a *benign Anacatharsis*, after that the *stitches* have abated, oftentimes the disease becomes *crude* and *exasperated* again, to the *detriment* or *death* of the Patient: as appears by the case of *Anaxion* in *Hippocrates*, and that other related by *Franciscus Rubeus*: as also by *Mercatus*. If it be not happily cured, the danger is no less than that it should change into a *Phrenitis*, or *Peripneumony*, or terminate in an *Apostemation of the Lungs*, or an *Empyema* in the *Thorax*. Where the disease is so full of *dangerous* as well as *vexatious symptomes*, it is not to be wondered that *Physicians* have diligently looked into the disease, and recommended unto our *practise* a great many things, which they who either *perfunctorily* look upon matters, or *superciliously* despise dangers, or out of *ignorance* cannot apprehend them, may contemn. That the *Blood* in *that disease* should acquire a *congealing* or *coagulating* quality seems *unimaginable:* both because that oftentimes the *procatarctic* cause is *sudden* in its operation: as when a *plethoric* person any way doth *over-heat* himself, or *drink cold drink*, &c. and also that the *congelation* in the *Pleura* (when it is *there*) is no other than what is seen in the *spots* of the *spotted Feaver*, or *Plague*; which seem not to be congelations of the Blood: Besides, How comes it to pass that this *aptitude to congeal*, if it be in the *whole mass of blood*, doth not discover it self any where else but in the *Pleura?* And if such a *Diathesis ad acescendum* in the blood produce a Pleurisie, How is it true that *Hippocrates* saith, *Acidum qui eructant, non sunt pleuritidi obnoxii?* Why also are *splenetic* persons (in whom we may best suppose such a *Diathesis*) not inclined to *Pleurisies*; except the *spurious* and *flatulent* ones? Is it not moreover known, that *Vinegar dissolves congealed Blood*, and is therefore given in *bruises:* As also

Ἀποθανόντων αὐτέων, ἡ πλευρὴ πελίη ἐυρίσκεται. Hippocr. de victu acut. l. 1. sect. 35.

Isbrand. a Diemerbrook de pest. c. 14. sect. 7.

Hippoc. aphor. 33. sect. 6.

ſo *Oxymel* and *ſyrup of Vinegar* in *Pleuriſies*? But 'tis evident that it is a *Feaver* accompanied with a *Catarrh* upon the *Thorax* and *Lungs*; and that it admits of a great *diverſification* according as the *Galenical* humours do operate in it; and in the Cure a *different regard* is to be had to a *bilious* or *pituitous Pleuriſie*, from what there is in one that is *ſanguine*: as any man knows that underſtands *Phyſick*, or hath ſo much as read *Salius Diverſus* upon *Hippocrates de Morbis lib.* 2. Or *Forreſtus's Obſervations*, lib. 16. It was the advice of *Hippocrates* at firſt to try to *diſcuſs it* by *fomentations*: if they ſucceeded not, then in caſe the *ſtitches* ſeemed to diffuſe themſelves *upwards* towards the *ſhoulders*, to phlebotomiſe the Patient, and let him to bleed largely until the *colour changed*, from *corrupt* to *red*, or from *pure* and *red* to *blackiſh*: But in caſe the pains deſcended below the *Diaphragme*, then to purge with *black Hellebore*, or *Peplium*. The reaſon upon which he ſeemed principally to go was, that a *Phyſician was to imitate the progreſs of Nature*, and to carry off the peccant humours by ſuch wayes as he inclined them to go: which in one caſe appeared to have a tendency to the *Arm*, in the other to the *Bowels*. But *Galen* conſidering the uncertainty that is in the operation of *purging Medicaments*; as alſo the hazard of *irritating inflammations* thereby, and the diverting that *ſputation* which is ſo requiſite in that *diſeaſe*: and that ſince a *Looſeneſs* was perillous therein, *purging* could not be *ſafe*: and I ſuppoſe that the ſad caſe of *Scomphus* may have diſcouraged him from it: who being *purged* in a *Pleuriſie*, became *frantick*, and died on the *ſeventh day*: the diſcourſes upon which *lamentable Hiſtory*, in *Valleſius* and *Van der Linden* do deſerve to be pondered: The *purge* did not *work much*, yet killed him. Some other caſes as ſad as this are recorded: upon the account whereof the generality of *Phyſicians* have prudently been ſwayed from *purging* in

Hippocrat. de victu in morb. acuet. l. 2. cum notis Valleſii. p. 42.

ὑπὸ πλευρίτιδος ἢ περιπνευμονίης ἐχομένῳ, λαβροῖσι ἐπιγενομένη, κακόν. Hippoc. aphor. 16. l. 6.

Valles. in Hippocrat. Epid. l. 6. p. 456. & Van der Linden ſelect. Medic. c. xii.

Hippocr. Coac. prænot. l. 5. sect. 2. sect 25.

a *Pleurisie* until the latter end: Because it is very convenient in a *Pleurisie* that the body be *moderately soluble*: they do give their Patients *Glysters*: and because the disease is a *Catarrh* accompanied with a *Feaver*, they conceive their main work to be this, *to prevent the increase of the fluxion*, by diverting the course of the *Blood* another way: and to *evacuate by a concoction* and expectoration the matter *inflamed* and impacted. To do this, they place the *beginning* and *foundation* of the Cure in *Phlebotomy*; yet do not *we* now insist upon their bleeding to a *Lipothymy*, or till the *colour of the blood change*, but rather chuse to *proportion* our *Phlebotomies* by other considerations; especially since it is visible in the case of great *fluxes of Blood*, that *revulsion is best performed by partite, and, after some intermission, repeated phlebotomies*: and in order to the *Anacatharsis* or expurgation by *spittle*, we do give them all befitting means to *expectorate concocted matter*: and use *anodyne unguents* and *fomentations* in order thereunto. There was heretofore a great quarrel about *bleeding in a Pleurisie*, which arm it should be administred in, and in what *vein*: But those are not the contests of *this Age*, wherein it is agreed to bleed on the *same side that is affected*, and to repeat the *phlebotomy* on the *contrary foot* or *arm*. Neither ought there to be any dispute about repeating *phlebotomy*, since the first occasion thereof *continuing*, or upon a *recrudescence* urging us again thereunto, if the *Patients strength* can bear it, we ought to repeat it. In this case the *Methodists* and *Galen* are reconciled; and I suppose it most evident upon *those Principles* I have laid down. For if the *Habit of the Body in a Pleurisie be become too adstrict*, then is it necessary to relax it and if the *disease be great*, by as *great remedies*; now their

Vesalius saith, that all the *quarrels* about the *different Phlebotomies* in a *Pleurisie*, were *Rixa de lana caprina*. *Vesal.* exam. obs. *Fallopii*. p. 129. yet this is evident, that *Nature delights to evacuate diseases of the liver by an Hæmorragy of the right nostril; of the spleen, by the right*. And that there is as it were a *seam in the body*, is *apparent in the Palsie*. So that 'tis *wisdome* for us to imagine, that 'tis not *indifferent* what side *we bleed on*.

their *grand relaxatory* is Phlebotomy: and after a *vomit*, they uſed it: yet had they this care, not to *bleed too much*, leaſt the body being too much *relaxed*, ſhould not be able to concoct the *impacted matter*: and the *Galeniſts* do give the like caution, that we have a care of hindering the *ſuppuration* by *importune Phlebotomies*. I find *Hippocrates* to have blooded *Anaxion* upon the eighth day: *Forreſtus* gives us Inſtances of the like nature. That frequent *Phlebotomies* in the ſame *Pleuriſies* have been practiſed *very beneficially*, is evident upon *record*: and in *Holland* I find *Tulpius* to accord with the *French* and *Spaniards*, and to allow, if the diſeaſe be violent, that the *Pleuritic* bleed *three*, nay *five* or *eight times*: and gives ſuch Preſidents for it at *Amſterdam*, as may juſtifie us at *London*. I will recite one caſe of his.

Valles Meth. med. l. 4. c. 2. *Riolanus* de circular. ſangu. c. xx. *Forreſt*: Obſ. l. xvi. Obſ. 33. in Scholio.

Tulpius Obſ. l. 2. c. 1, 2, 3.

Tulpius Obſ. l. 2. c. 2.

c c Uxori Cuſparis Walendalii, inſurrexit, octavo a
c partu die, acerbiſſimus lateris dolor: repetens identi-
c dem, tot inſultibus, ut neceſſe fuerit, ter pedis, &
c quinquies brachii exoluere venas: antequam compri-
c meretur, ſanguis, a ſuppreſſis menſtruis ſurſum raptus.
c Sed ea fuit ipſi virium conſtantia: ut præter ſangui-
c nem toties detractum, ſuſtinuerit inſuper ingens alvi
c profluvium, antequam integre, evicerit hunc mor-
c bum.

There is a great variety in the practiſe of *Phyſicians* as to *Phlebotomy*, ſome uſing it *more frequently* than others do: whether theſe be rash, or the others *indiſcreetly timerous*, I will not determine now: Both may *do well* as to the *recovery of the Patients*; becauſe a *judicious* perſon ſupplies one *Medicine* by the uſe of another: But theſe *Baconical Ignoramus*'s cannot do that. I find that *Forreſtus* ſeldome, if ever bled his

Pleuritics above once: and *Blondelus* assures me, that the Peasants of *France* bleed but once in a *Pleurisie* at the beginning, and recover. "*Plebeii fere omnes* "*una vice contenti adire Medicum, una sola adhibita* "*venæ sectione curantur, & ex decem unus vel duo emo-* "*riuntur, & aliquando omnes sanantur*. Without all controversie *Phlebotomy* is one of the most *generous remedies* in the World, if a man understand the Art of using it: But 'tis our old Books, and not the *Novum Organum* of my Lord *Bacon*, or the insipid Writings of the *modern Experimentators* will qualifie a man thereunto. I do believe that *Botallus* did the *wonders* he speaks of, but as there were left-handed *Catoes* heretofore, so there is many a left-handed *Botallus*, that would imitate his *practise*, yet wants his *judgment* and *learning*. I would advise *such* to be *tender* how they deal *much* in this *noble remedy*, or rather that they would totally desist from *practising Physick*.

Almaricus Blondelus de venæ sectione, p. 50.

I know that in *Germany* most are *scrupulous* about reiterated *Phlebotomies*, yet *Platerus* commends it in *Pleurisies*, and adviseth to bleed frequently, even twice in a day in the beginning of the Disease. 'Tis not that the *people* there *cannot* bear it so well as in *France*, or *Spain*, but that they *will not*: There was a time when *Galen* thought that such as the *French*, could not bear will the *loss of blood*: and *Valleriola* did imagine that the *Moors* and *Spaniards* could not endure it so well as the *Dutch*, or *French*: there was a time when to let a *Woman with child blood* in *England*, was esteemed impracticable: and the Lady *Drury* was a *bold* Lady, that in the dayes of Queen *Elizabeth*, durst obey *Botallus* therein, against the opinion of the greatest *English* Doctors: But a greater *maturity of judgment*, and the *good success* hath undeceived us, and convinced us, that our fears were but *panick* and *vain*: and in opposition to *Galen* and *Hippocrates* we accord with *Celsus*.

Platerus prax. t. 2. c. x.

I. *Riolan.* de circulat. sang. c. 20.

Botallus de venæ sect. c. 3.

"*Siquidem*

" *Siquidem antiqui, primam ultimamque ætatem ſuſti-*
" *nere non poſſe hoc auxilii genus judicabant; perſua-*
" *ſerantque ſibi, mulierem gravidam quæ ita curata eſſet,*
" *abortum eſſe facturam, Poſtea vero uſus oſtendit, nihil*
" *ex his eſſe perpetuum, aliaſque potius obſervationes ad-*
" *hibendas eſſe, ad quas curantis conſilium dirigi debeat.*
" *Intereſt enim, non quæ ætas ſit, neque quid in corpore*
" *intus geratur, ſed quæ vires ſint. Ergo ſi juvenis*
" *imbecillus eſt; aut ſi mulier, quæ gravida non eſt, parum*
" *valet, male ſanguis mittitur, emoritur enim vis, ſiqua*
" *ſupererat, hoc modo erepta. At firmus puer, & robu-*
" *ſtus ſenex, & gravida mulier valens, tuto ſic curantur.*

C. Celſus Medic. l. 2. c. 10.

I have ſeen ſome of *all Ages* phlebotomiſed, and have preſerved the lives of ſome ſmall Children by that means; even *Pleuriſies*. But the effects of *Phlebotomy* in a *pleuritic* woman, which was within a *fortnight* of her time, are remarkably deſcribed by that *cautious Practitioner, Baldaſſar Timæus*: He did not ſcruple to let a *gravid* woman *blood*, but ſhe was ſo *far gone*, as that he trembled: " *Tandem non tantum adſtan-*
" *tibus mulierculis, ſed & ipſa ægra venæ-*
" *ſectionem vehementer urgente, exemplo* Pe-
" tri Salii Diverſi, *qui ultimo menſe, & in-*
" *ſtante partus tempore feliciter venum ape-*
" *ruit, jeci aleam, & ſecta mediana ſangui-*
" *nem ad uncias circiter ſex detraxi, & ſic*
" *optato ſucceſſu & matrem & fœtum a præ-*
" *ſentiſſimo vitæ periculo, Dei gratia, liberavi.* There are a multitude of things to be conſidered by him that would *judiciouſly* practiſe Phlebotomy in *Pleuriſies*; beſides what I have intimated: as *Whether it ſucceed another diſeaſe*, as the Meaſils, *or be primary: Whether it be complicated with other diſtempers, or ſolitary: Whether it be crude, or upon concoction: Whether it be likely to be long, or ſhort: Whether the Patient do expectorate,*

I have ſeen *Ladies* with child to be let *blood*, when they were continually *ſwooning*, and *fainting*, and extream weak: and that *judiciouſly*: for they having *large veins*, and otherwiſe a *firm* and *imperſpirable habit of body*, we did not regard the *Animal imbecillity*, nor the *irregularity* of a *pulſe* altered by *vapours*, but proceeded to cure them by *Phlebotomy*: and it proſpered.

Baldaſſ. *Timæus* reſponſ. Medic. 58.
Petrus Salius Diverſus de affect. particular. c. xxii.

or not, If be do; what colour, and what consistence, or taste the evacuated matter hath: Whether the disease be upon a recrudescence, or not: These are circumstances which he ought well to understand, for as to the time of *phlebotomy*, 'tis one in a long disease, when the beginning is protracted to *seven, ten* or *seventeen* dayes; and another in that which will terminate in *seven dayes*: the *urgency* is one in an *incoct* Pleurisie, when nothing is (in due time) expectorated; and another, when *blood*, or *purulent* but *benign* matter is avoided: and another when the matter is *black, livid, very yellow*, or *stinking*, or *sweet to the taste*: the case alters when Nature doth ease her self by a *propitious looseness*, and when it is an importune *Diarrhœa*: when it turns to an *Empyema*, and when it proceeds to an amicable *Crisis*. These things are to be pondered by the *Physician*, and his repute is not to be questioned, for *his actings*, by such as understand not the *case*, or apprehend not by what *exigences* and presidents the *intelligent Practitioner* is guided. Men ought not to judge of Diseases by their *names* only; and condemn a *knowing man* for doing that in *one disease* at one time, which neither *they* nor *he* would adventure in *another*: and since it is not allowed *us* to abandon our *Patients* in some cases, according to the advice of *Hippocrates*: give us leave to make use of that *Apology* which *Celsus* doth suggest unto us: " *Fieri tamen* " *potest, ut morbus quidem id desiderat, corpus tamen vix* " *pati posse videatur: Sed, si nullum tamen appareat aliud* " *auxilium, periturusque sit, qui laborat,* nisi temeraria " quoque via fuerit adjutus, *in hoc statu* boni " Medici *est ostendere, quam nulla spes sine sanguinis* " *detractione sit; faterique quantus in hac ipsa remetus* " *sit, & tum demum, si exigatur, sanguinem mittere.* " De quo dubitare in ejusmodi re non oportet " *Satius est enim anceps auxilium experiri, quam nullum.*

c. Celsum Medic. l. 2. c. 10.

Let the World rest assured, that an understanding *Galenist*

leniſt doth nothing *raſhly* : that he conſiders of all circumſtances, and knows their caſe better than themſelves; that he hath as great a regard to the preſervation of their *vital ſtrength*, as they can wiſh : and apprehends when to *deſiſt*, and when to *operate*, and *in what manner* : but theſe are *myſteries* to the *Baconiſts* : and I can give no better directions to the *ſick*, than that *they would apply themſelves to a prudent Phyſician*, rather than *Quacksalvers*, and *refer themſelves to his judgment*, without impoſing *their own*, or that of *ignorant Experimentators*, and *Arcaniſts*. And ſo much concerning *Phlebotomy* in *Pleuriſies* : the more exact handling whereof, and the accommodating of the Method of *Rulandus* to that of the *Galeniſts*, muſt be the ſubject of *another diſcourſe* : I add only, that *Nature* it ſelf doth teach us the uſe of *Phlebotomy* in *Pleuriſies*; for *they are often accompanied with a bleeding at the noſe*, in the beginning, which is *beneficial* to the Patient. *Larvi ſanguinis fluxus ex naribus multa ſolvunt, ut Heragoræ. Non agnoſcebant Medici.* Though it happen *ſymptomatically*, yet is it frequently *advantageous*, even in *Pleuriſies* : nay 'tis an accident we may commonly expect in them : *Quibus febricitantibus rubores in facie, & capitis vehemens dolor, venarumque pulſus, iis ut plurimum fluor fit ſanguinis* : and in a *Pleuriſie*, 'tis alwayes the moſt *mild* and *ſafe*, if the Patient begin his *Anacatharſis* by a *ſub-cruent ſputation*. In fine, ſhe uſually *terminates* this Feaver by an *Hæmorragby* at the Noſe, which if it be *ſmall* doth portend *evil*; but if it be *large*, is beneficial. *Pleuritis larga hæmorrhagia enaribus judicare poteſt, ſtillatione non poteſt.* And this *good fortune* did recover *Demoſthenes* out of an incurable *Pleuriſie*, as he relates it himſelf. "*Febres me continuæ ſequebantur, & cru-*
"*ciatus totius corporis perquam vehementes & atroces :*
"*imprimis vero laterum & imi ventris : neque cibum*
"*capere poteram; & ut Medicus quidam affirmabat, niſi*
"*mihi*

Hippocr. Epid. l. 2. ſect. 3. p. 102. cum notis *Valleſii*. *Proſp. Alpinus* de præſag. vita & morte. l. 7. c. 2. *Coac.* prænot. l. 4. v. 30. *Proſp. Alpinus* de præſag l. 7. c. 16. *P. Saluis* com. in lib. 1. *de morbis*, p. 170. *Holler.* apud *Iacot.* in *Coac.* l. 5. ſect. 2. ſect. 59. *Demoſth.* adv. *Canou.* citante *Beverovicio* de Med vet. part. 3. c. 7. p. 312.

' *mihi doloribus afflicto, & jam desperata purgatio san-*
' *guinis ultro copiosa supervenisset, me sanios*um (ἔμπυον)
' *factum fuisse periturum*: nunc is sanguis recessu mihi suo saluti fuit. I have not the original *by me*, to consult the *Text*: but whether it were at the *Nose*, or by *Stool* (I believe the *former*) it is all one to the *presen*t *purpose*; but it may seem pertinent to observe, that those which *bleed* much at the *Emeroids* are not incident to *Pleurisies*.

Hippocr. Epid. l. 6. sect. 3. p. 665. cum notis *Vallesii.*

The subject of my next discourse must be concerning *Phlebotomy* in the Small Pox: My Adversary blameth Doctor Willis for allowing of *Phlebotomy* in the Small Pox, *upon the nick of their eruption*: but by way or Argument against the judgment of that eminent *Practitioner*, he alledgeth nothing but this:

pag. 80.

' ' *Make this good* by fact, *that 'tis profitable and necessa-*
' *ry in any such case to open a vein* (for αὐτὸς ἐν, *will*
' *never carry with me*) *then I shall forthwith become a*
' *Proselyte to your Method. Assuredly this, I am certain*
' *of it, was neither profitable nor necessary for the Nation,*
' *that we should by this means loose three persons of the*
' *noblest extract.*——I have alwayes looked on the discourse of that Learned man *concerning Feavers*, as one of the most *judicious Writings* that ever our *Faculty* produced: 'tis succinct without *obscurity, and without the omission of any circumstances that frequently or rarely fall under the consideration of a Physician, and the* practise, *as well as* Medicaments *so* safe, *so* authenticate *according to the* Rules of Art *and* practical Observations (which we preserve) that *'tis above all the effects of* Envy *and* Malice.

It is a great abuse to the Doctor which this Bacon-faced *Helmontian* put upon him, as if he approved *generally* and *indefinitely* of bleeding in the Small Pox *upon the nick of their eruption*. It appears *there* not to be his practise, but upon urgent cases; and *he,*

he, on purpoſe relates an *Hiſtory of its evil effects*, thereby to deterr others from uſing *Phlebotomy* raſhly *in that diſeaſe*. I ſhall repeat his *words*, and *method* of curing it, as far as relates to the *beginning of the diſeaſe*.

" *Quoad primum intentio ſit, ut naturæ impedimenta* Williſſ. de febr.
" *quævis auferamus, quo ſanguis, variolarum fermento in-* c. 15.
" *quinatus, & coagulari aptus, adhuc motum æquabilem in*
" *corde & vaſis ſtagnatione retineat, ac efferveſcens por-*
" *tiones cum veneno gelatus foras expellat : interim cau-*
" *tio ſit, ne fermentationis, ſeu efferveſcentiæ opus ulla-*
" *tenus cohibeatur, aut nimium proritetur : hoc enim cru-*
" *oris maſſa plus debito in portiones congelatus agitur, iſto*
" *reſtringitur nimis in motu, nec particulæ venenatæ cum*
" *cruore gelato foras emandantur : natura a ſecretionis*
" *& expulſionis opere impedire ſolet nimia excremento-*
" *rum congerie in viſceribus, aut ſanguinis exundantia in*
" *vaſis; quare primo ſtatim morbi inſultu deinda erit*
" *opera, ut evacuatio per vomitum, aut ſedem, ſi opus fuerit,*
" *tempeſtive procuretur, pharmacis tantum mitioribus &*
" *blandis utendum eſt, quæ nimirum non irritent, aut hu-*
" *mores perturbent : quare hoc tempore interdum emetica,*
" *purgantia, aut enemata, modo hæc, modo iſta locum ha-*
" *bent : etiam ſanguinis miſſio, ſi plethora adſit, bono*
" *cum ſucceſſu celebratur.* ——— *Circa miſſionem*
" *ſanguinis inſtante variolarum eruptione valde ambigi-*
" *tur : olim inter noſtrates hæc res ſacra audiebat, neque*
" *ſub ullo neceſſitatis prætextu Phlebotomia admitti ſole-*
" *bat : nuper autem experientia duce in quibuſdam caſibus*
" *ſanguinem mitti omnino utile & neceſſarium eſſe com-*
" *probatur : quæ tamen evacuatio ſi in quavis conſtitu-*
" *tione indiſcriminatur adhibeatur, aut quando iſthac*
" *opus fuerit, in quantitate nimis larga peragatur, magna*
" *ſæpe incommoda exinde ſequuntur.*

Theſe are the words of that *intelligent perſon*; whereas——*G. T.* ſeems in the *Engliſh* Text to affix upon him ſuch a *ſentiment* as if he allowed *commonly*

and *indiſcriminately* of *Phlebotomy* in the *very nick of the coming out of the Small Pox:* But it may be replied, that he hath done the Doctor *juſtice* in the *Latine citation:* but I think *not* amongſt *Engliſh Readers*, nor in his *vulgar diſcourſes.* However I ſhall endeavour to juſtifie the aforeſaid *Method* of Doctor *Willis* as *Artificial*, and agreeable to the *opinion* and *happy practiſe* of the beſt *Phyſicians:* and that it may be more manifeſt, I will inlarge *my work*, by examining the *contrary opinions* of ſome *others:* for——*G. T.* gives my Pen *here* no employment, except it be to tell him, that the *three noble Perſonages which he ſpeaks of were not the* Doctors Patients, as I believe: except he be accountable for all that act agreeably to that *Method* which *He* (and our beſt *Phyſicians*) layes down: I add, that many actions are warrantable by Art and Prudence, which are not ſucceſsful: and to requite *his Catalogue*, I would have him know, that when this young King of *Spain* had the Small Pox, he was let blood ſeveral times: and ſo was the preſent Queen of *France* upon a feaveriſh indiſpoſition let blood *twice*, in 1663. and two dayes after the *Meaſils* appeared: And this Lewis xiv. being ſick of the *malignant and peſtilential Small Pox* was thrice blooded by Doctor *Vautier:* and for *it*, received this *Elogy* from the learned *Jacobus Thevart.*——*Ut boni omnes Galli palam profiteantur ac prædicent ſuum ſe tibi debere Regem chariſſimum, quem nempe malignis ac peſtilentibus variolis periculoſiſſime laborantem non cordiacis tantum præſidiis (ut Medicaſtrorum ἀμαθίων vulgus ſolet) ſed & ipſa, quam in ejuſmodi affectibus averſantur ac damnant, ſanguinis miſſione ter, pro ſymptomatum urgentium neceſſitate, repetita, ſalvum & incolumen reſtituiſte, innumeris interim in hac urbe populoſiſſima pueris hac Epidemica lue e medio ſublatis. Quod ob facinus tam egregium quæ non tibi laudes,* vir præſtantiſſime, *quæ non ſoteria debentur? Si qui civem Romanum in prælio ſervaverat, quercea*

Iacob. Thevart in dedicatione tomi tertii Conſil. Medicin. *Ballonii*, ad D. D. *Franciſc. Vautier* Archiatrorum Comitem.

quercea corona dignus habitus est, Tu certe qui Regem Christianissimum ab hoste tam infenso liberasti, auream, qualis est ab Athenien sibus Hippocrati concessa, meruisti. Nec dubito quin si vixisses priscis illis temporibus, quibus inter Heroas referebantur quicunque insigni aliquo facinore Rempublicam conservassent adjuvissentve; quin, inquam, ipse Heroum auxisses numerum, honoresque prope divinos accepisses. I repeat *this passage* with the more satisfaction, because it may serve as *example* to the *English*, and instruct *them* with what *gratitude* and *acknowledgments* they ought to treat the *learned* and *renowned Physician* Sir Alexander Fraser, *principal Physician to his Majesty*, for recovering our most gracious *Soveraign* of the like distemper, by the *judicious* administration of Phlebotomy. I could name many other *Persons of Honour*, who do confess that they owe their recovery out of dangerous and malignant Small Pox unto *Phlebotomy*.

Of those that have written concerning the Small Pox, and are *therein* professed enemies to Bleeding, I shall take only *two* particularly to task; the one is Doctor *Tobias Whitaker*, the other Doctor *Thomas Sydenham*: which I do the more willingly, because the *one* writing in *English*, the other practising at *London*, and endeavouring to *insinuate his principles* every where, with a derogation from the *authorised* practise of *Physicians*, it must needs seem that *all who do not take his course, have neither regard to the Patients, nor considered seriously the rise and progress of the disease.* I did at first doubt, *Whether I ought to reckon them as* distinct Authors, because they so far agree in the *Regimen* and *Cure of the disease*; that the *one* doth seem to have *stollen* it from the other: As will appear by this *Parallel*.

Doctor *T. Whitaker* of the Cure of the Small Pox, p. 22.

" In the *Regimen* of this Diſeaſe, the whole work
' conſiſts in *moderation of Air* and *Diet*, without
' any other mixtures of violence, or bland impedi-
' ments, which may altogether pervert, or *in* or by a
' leſs force retard Nature in its motion, the motion of
' Nature in this caſe being from the beginning of the
' diſeaſe to the eruption of the puſtules *Critical*, and
' in *Critical* motions the leaſt application of any Medi-
' cament is ſo dangerous, that no expert Phyſician will
' admit of it.——The Diet is to be *Alimentum medicamentoſum*, ſuch as is *Milk* with *Saffron* and *Marigold flowers*.

" Doctor *Sydenham* doth ſuppoſe that it is natural
' for the Blood of all perſons at leaſt once in their lives
' to undergo a great change, and as it were a new
' form: and that there is no peculiar *venome* or *ma-
' lignity* infecting the *Blood*, but all is the reſult of this
' *inclination* in it to *exchange its ſtate*; and in order
' thereunto *ſome parts* are to be *expelled*; and in order
' thereunto muſt firſt be *ſeparated*: This is done by a
' Feaveriſh Ebullition in the maſs of blood, where-
' by *thoſe* parts are *ſeparated from the reſidue*, and diſ-
' charged into *fleſhy parts* of the Body, which Nature
' looks as requiſite in order to the change ſhe is going
' to make: All this is uſually done in *four dayes*, and
' the *Blood* is *recompoſed* and becomes as *calm in its mo-
' tion*, as it was before. The *expelled matter* is to be
' elevated into *puſtulary abſceſſes*, and there *maturated*
' and *dryed up*. For the carrying on of all *this work*,
' it is his judgment that the *Phyſician* ought to Do no-
thing: But the Patient is to be kept in a *moderate heat*, and *temperate diet*, taking nothing that is *cold*;

and

He obſerves that this *Feaveriſh*, or great *ebullition* is not conſtant to the *Small Pox*, but that the *ſeparation* and *expulſion* is frequently performed without any *great ſenſe* thereof, the Patient never confining himſelf to the *chamber*.

'and not so much as being confined to his *bed* beyond
'his ordinary use, except necessity require it, and then
'he is to use no more *clothes*, nor *warmth* than he accu-
'stomed himself unto in *health*, not so much as being
'obliged to keep his armes in Bed. On the fourth
'day he gives them one *very gentle Cordial* to promote
'their *eruption*, and abandons them to *Saffron* and
'*Milk*, to be given twice a day, and ordains that he be
'kept in a *constant moderate warmth*, such as is *natural*,
'and usual to the Patient.

This is the sum of his *Method*, except I add, that
'when they are upon *maturation*, he gives a *mild Cor-*
'*dial* twice each day, *morning* and *evening*: And in
'case that during the time of the *decumbiture* of the
'Patient by any accident a *new Feaver* arise, then is the
'Patient to be kept still in such a *proportionate heat* as
'is usual to him in health, if the season be temperate, he
'is not to have a fire; to be dieted with *small Beer*
and *Water-gruel*, *stewed Apples*, or the like, but to
'have no *Cordial*, not so much as *Hurts-horn posset-*
'*drink*.

By this *Method* Doctor *Sydenham* doth not doubt
but *this disease* which so affrighteth people, and is so
frequently *mortal*, will pass off with much *gentleness*,
ease and *safety*.

Betwixt these two there is a little discrepancy in
their *Method of curing the disease*: though there be
some in *their expressions*, and Doctor *Sydenham* doth
seem the *Comment*, the other the *Text*. Both of them
oppose *Phlebotomy*, *Vomits*, *Purges* and *Glysters*, as well
as *Sudorifics*. Though they differ in the reason for
their rejecting *Phlebotomy*; For Doctor *Whitaker* doth
avow, that *it draws from the Circumference to the Cen-*
ter: But Doctor *Sydenham* yields, that *it produceth a*
quite contrary motion, and causeth the Small Pox to come
out.

Doctor

p. 65. Doctor *Whitaker* doth avow, that this course of *his* is the old English Method, and the ancient, national and successful government of our Nation. But Doctor *Sydenham* would seem to erect *his practise upon his own Observations*; though all he propose (in a manner) be no more than the *common actings of Countrey-people*; (except when by any accident the *Feaver* be exasperated in the *beginning*, or *progress*, that he *prohibits Cordials*) and what I belive was derived from *Avenzoar*, and *Fracastorius*.

Foreſt. obſ. l. 6. obſ. 44.

p. 25. Of these Writers it is remarkable, that Doctor *Whitaker* doth never allow that there can be any *malignity* in the Small Pox so great and *urgent*, as to induce a *Physician* to intermeddle beyond a *moderate Diet*, and *temperate Air*: because the *Motion being* Critical, *admits of no violence*. But this is a great Errour in the *fundamentals* of *Physick*. For, first in Diseases complicated with *malignity*, not only the *prognosticks*, but the issues are very *uncertain* as to *life*, or *death*, and the Critical *evacuations* deceitful, so as that oftentimes they bring a *momentany alleviation*; oftentimes, notwithstanding *those evacuations*, the distemper increases, and the Patients dye: This every man understands who is conversant in our accounts of *Malignant Feavers*; so that to grant at any time that there is a *malignity*, or *venenate indisposition* in the sick, and to abandon him to a *temperate Air* and *Diet*, relying upon *Saffron* and *Milk*, is a practise never to be justified in *Physick*. But alas! we are not to be affrighted with the *bug-word*, Critical motion; nor half an Aphorisme out of *Hippocrates*; viz. *Quæ judicuntur, sinere oportet*. These *general sentences* neither qualifie a *Doctor in Law*, nor a *Physician*: It becomes us to consider in a Critical motion several things:

Prosper. Alpin. de præsag. vit. & morte. lib. 6. c. xi.

First, (Supposing it to happen in its *due time*) we must consider whether it be only a Motion, or whether

ther it be proportionate to the Diſeaſe: for no *evacuation* that is *diminute*, is properly *Critical*: If therefore the *pathognomonies* of the Diſeaſe be ſuch as argue a multitude of the *Small Pox* to be requiſite for the *recovery* of the ſick, and only a few come out, the *Phyſician* is obliged to aſſiſt Nature.

Secondly, Suppoſing that *they* do come out *plentifully*, yet if they be not ſuch as ſhould come out, but *black*, *livid*, *green*, or interſperſed with *purple ſpots* (not to mention other circumſtances, which every *Nurſe* can tell) 'tis certain that the *evacuation* (how *critical* ſoever) doth not oblige the *Phyſician* to ſtand an *idle Spectator*: No more ought *he* to be in caſe that all *ſymptomes* increaſe upon the *critical* motion, and his *Feaver* and *dangers* multiply thereupon. Τὰ χαρίοντα μὴ τῷ πλήθει τελμαίρεσθαι, ἀλλ' ὡς ἂν χαρίεν δοκῇ, καὶ φέρει ἐυφόρως. *Hippocr.* Aph. 23 ſect. 1. & aph. 25. ſect. 1.

Thirdly, It is requiſite that the *Critical evacuation* be *per loca conferentia*, by ſuch wayes *as are neceſſary to the diſeaſe*: But if the Small Pox during their eruption be attended with a *dyſentery*, *bloody urine*, or other *pernicious excretion*; that ſcrap of *Hippocrates* will not excuſe the *Phyſicians* negligence; for it ſuppoſeth that all the *conditions* requiſite to a *good evacuation* be found in that which the *Phyſician* is *not to intermeddle with*. I need ſay no more to *intelligent perſons*: 'tis not my preſent work to turn Inſtitutioniſt.

Whether Doctor *Sydenham* intend to aſcribe *ſenſe*, *appetite* and *judgment* unto the Blood I cannot well tell; but either He canteth in *Metaphors*, or explaineth himſelf, in his general *Hypotheſis* about Feavers, as if his meaning were ſuch: "*Quinimo nec, mea* 'ſententia, minis liquet febrilem ſanguinis commotionem 'ſæpe (ne dicam ſæpius) non alio collineare, quin ut 'ipſe ſeſe in novum quendam ſtatum, & diathe'ſin immutet, *hominemque etiam cui ſanguis purus* p. 4, 5.

'&

'& *intaminatus perſtat, febre corripi poſſe: ſicuti in*
' *corporibus ſanis evenire, frequenti obſervatione com-*
' *pertum eſt, in quibus nullus apparatus morbificus, vel*
' *quoad plethoram, vel quoad cacochymiam fuerit, nulla*
' *inſalubris aeris anomalia, quæ febri occaſionem ſubmi-*
' *niſtraret. Nihilominus etiam hujuſmodi homines, præ-*
' *cedente inſigni aliqua aeris vel victus; cæterarumque*
' *rerum non-naturalium (ut vocant) mutatione identi-*
' *dem febre corripiuntur; propterea quod* eorum ſan=
' guis novum ſtatum, & conditionem adipiſci
' geſtit, *qualem ejuſmodi aer aut victus poſtulaverint:*
' *minime vero quod particularum vitioſarum in ſanguine*
' *ſtabulantium irritatio, febrim procreet.*

'Tis true *he* did not pen it in *Latine*, but another (Mr. *G. H.*) for him: and perhaps his ſkill in *that tongue* may not be ſuch, as to know when *his* thoughts are rightly *worded*: But it ſeems *ſtrange* and *irrational* to attribute ſuch an underſtanding to the *Blood*; and to tranſmute a *natural Agent* into one that is ſpontaneous: and, which is more, having repreſented it *as ſuch*, to make it ſo *capricious* as not to know *when it is well*; but to run *phantaſtically* upon ſuch *dangerous changes* as occur in *putrid Feavers*, and the *Small Pox*; for even in *this laſt* ariſeth from *a deſire the Blood hath to change its ſtate.* Since *natural Agents demean themſelves uniformly*, and of *them* 'tis moſt true, *Idem, quatenus idem, ſemper facit idem*: I was ſurpriſed to ſee theſe *new principles*, and to ſee *effects of this nature ariſe without any cauſe.* It doth not ſeem *poſſible* for him ever to demonſtrate that there is no *Plethora*, or *Cacochymy*, or *obſtipation of the pores of the body* antecedent to a *Feaver*: nay the contrary ſeems evident to all *Phyſicians*; nor ever was there any whereunto they did not attribute ſome *procatarctick* cauſe. Beſides, he doth not alledge any *Reaſons*, or *Experiments*, to ſhew that there is any *alteration in the blood* before and after the *Small Pox*, or a *Feaver*, or

p. 127.

any

any difference betwixt the *Blood* of ſuch as have had *thoſe diſeaſes*, and of thoſe which have *not had them*. So great a *ſuppoſition* ought not to be made *without ground*. And ſince it is *natural* (and *Nature* is conſtant) why is not the *Diſeaſe* more *ancient* and *univerſal* than it *appears* to be? For, if there be any grounds to think the Small Pox to be of long continuance, 'tis certain 'tis but ſeldom ſpoken of by any old Writer: perhaps once by Hippocrates (yet ſo as never to be *underſtood* by any that hath not ſeen the indiſpoſition) and never by Galen. It may be imagined to have come from *Ægypt* by *contagion*, and might have been called Βαβασικὴ ἕλκη, *Quia urbi Bubaſti Ægyptiæ familiaris hic morbus*. It infeſteth *ſome places* more than *others*. In Græcia non adeo frequens. Ideo antiquiores Medici vix ejus meminerunt. In the *Weſt-Indies* it was not heard of till the *Spaniards* came thither: and *they* (as alſo the *Engliſh* there) ſeldome have *it*. I believe the Diſeaſe to be novel, and of no longer *date* than the *Sarracenical* revolution: I could inſtance in the nature of ſuch *great alterations*, that *they* have *ever* been *preceded* and accompanied with many *petty changes* in other things: and if ever I have ſo much *vacant time* as to make *political reflexions* upon the riſe of Mahomet, I may declare much to this *purpoſe*. This is that *invidious ſubject* about which Ecebolius Glanvill makes ſo much *noiſe*: as if, to avow that Mahomet were a Gentleman of noble extraction, married to one who for *birth*, *riches* and *beauty* might have been a Princeſs; and accompliſhed with that ſober Vertue, Wit, Eloquence, and Education, by much travel (for he travelled all over *Ægypt*, *Africk*, and *Spain*) as to render himſelf one of the moſt *conſiderable of his Age*: or to ſay that the Chriſtians were ſo *ignorant*, and *debauched*, and *perfidious*, and addicted to *Legends* more than to the *ſound Doctrine of the Goſpel*, at that

Salmas. de annis Climacter. p. 726, 727. 'Tis *Epidemical* to *Ægipt* at this day. *Proſp. Alpin.* de med. *Ægipt.* l. 1. c. 14. *Roderic. a Fonſeca* Conſult. Medic. t. 1. conſult. 48.

time, that moſt of the *Fables* in the Alcoran were accommodated to the *honour of the times*, more than to truth (and ſo *Mahamet* told them) or to ſay he pretended to revive Ancient Chriſtianity; were to be an Apologiſt for the Mahometans, and an abettor of the Alcoran: Whereas none but the Illiterate can deny *theſe things*: and the *Age* our *Virtuoſo* ſpeaketh of is the Age of *Apoſtacy*, according to the Doctrine of our Church. Oh Heavens! to what an height is Impudence and Ignorance arrived! Or what can be ſafe, if ſo *prudential* and *generous* a deſign as I had muſt be *calumniated* by ſuch a R——in *this manner!* Bnt to reſume my diſcourſe, in the behalf of *my opinion* concerning the *novelty of this diſeaſe*, (beſides what the learned *Mercurialis* hath ſaid) I ſhall conclude with the words of *Rodericus a Fonſeca*, which are theſe. "*Si ex nativitate eſſet, ab initio* "*mundi fuiſſet, aut ſaltem ita frequenter tunc, ut nunc* "*ſolet eſſe: et licet antiqui aliquam de his puſtulis men-* "*tionem feciſſe viſi ſint, ea certe exigua eſt, & dubia, ut* "*certum ſit, vix illis temporibus fuiſſe talem morbum:* "*negligentiſſimi certe habendi eſſent, ſi tam ingens, com-* "*mune, & frequens malum; illotis manibus, ſilentio in-* "*voluiſſent: & cum morbus ſit puerilis, Hippocrates eas* "*numeraſſet inter ætates* 3. Aphor. *ubi diligentiſſime pue-* "*rorum morbos connumerat; & tamen nullam hujus mali* "*fecit mentionem: ſed illud ſatis demonſtrat, hunc mor-* "*bum novum eſſe; quod in multis mundi partibus nun-* "*quam viſus fuit, ubi nunquam apparavit, niſi poſtquam* "*Hiſpani eo pervenere: ſiquidem per contagium Æthio-* "*pis cujuſdam illuc delati, magnam Indorum partem ſu-* "*ſtulit.*

Roderic a Fonſeca in append. ad *loc. chin.* de febr. c. 54. vide & *Ranchin.* de morb. puer. ſect. 2. c. 1. p. 258. *Hofman.* Animadu. in *Monton.* c. 7. ſect. 15. & Inſtit. l. 3. c. 109. ſect 1. & *Nardicis* noct. genial. 7 p. 456, 457.

I might here inſiſt upon the *Hypotheſis* of Doctor *Sydenham*, concerning the Inclination of the Blood to change its ſtate: I cannot believe but that the Phyſicians underſtood themſelves as well *before he writ*;

writ; when it was ſaid, that *there was in every one that was born, ſomething of impurity in the body, which was* naturally *to be purged out by an ebullition in the blood, and ſuch an effervеſcence as terminated in thoſe* Abſceſſus *called the* Small Pox. ', *Quandoque accidit* ' *in ſanguine* ebullitio *ſecundum ſemitam putredinis* ' *cujuſdam de genere ebullitionum quæ accidunt ſuccis :* ' *& talia quidem accidentia fiunt per eam, ita ut partes* ' *eorum ab invicem diſcernantur. Et de hoc eſt cujus* ' *cauſa eſt, res quaſi naturalis faciens ebullitionem ſan-* ' *guines, ut* expellatur *ab eo illud, quod ad miſcetur ei de* ' *reliquis nutrimenti ſui menſtrualis, quod erat in hora* ' *imprægnationis, aut generatur in eo poſt illud ex cibis* ' *fæculentis, & malis, de illis quæ* rarificant ſubſtantiam ' ejus, & faciant eam ebullire, donec fiat & ſubſtantia ' recta fortior prima & magis apparens : *ſicut illud,* ' *quod natura efficit in ſucco uvæ, ita quod rectificat ip-* ' *ſum, faciendo vinum ſimilis ſubſtantiæ : & jam ex-* ' *pulſa eſt ab eo ſpuma aerea, & fæx terrena.* He that can *Engliſh* this paſſage will find in it the ebullition, ſeparation, expulſion and deſpumation of our Doctor. In truth thoſe *terms*, nor that which *he* imports by *them* are no *novelty* amongſt *Phyſicians* : and *Rhaſes* (as *Sennertus* ſaith) doth not make any mention of thoſe *uterine impurities* as the cauſe of the Small Pox, but *compares the Blood to* Muſt, *in which ſome impurities are to be ſeparated by* Ebullition. Wherein the whole *Hypotheſis* of *this ſemi-Virtuoſo* is contained : However, I cannot allow *any more* to *his Obſervations*, than if a man *ſhould go without his doublet*, and pretend to a new Mode *of wearing Breeches*. But that which is moſt intollerable in Doctor *Sydenham* is, that He ſeems to attribute *all the evil conſequences of the* Small Pox *to the indiſcretion of thoſe that attend them*; be they *Nurſes*, or *Phyſicians*. Thus (p. 150. Edit. 2.) he makes as if *Nature* did diſcharge it ſelf in that *diſeaſe* into the fleſhy parts only :

Avicenna de febribus, c. 6. de variolis.

Rhaſes de peſtilent. c. 1. *Sennert.* de febr. l. 4. c. xii.

Hor. Augen. de febr. l. 9. c. xx. *Steph. Caſtren.* Quæ ex quibus, l. 3. c. 16. *Th. Bartholin.* Ciſta Medica, p. 594. *Fernel.* patho. l. 4 c. 18. & de abdit. rerum cauſis, lib. 2. c. xii. *Colladon* obſ. in *Holler.* meth. c. 92. *Io. Dan. Horſtius* obſ. Anatom. 9.

only: ſo that if the *Eyes*, *Lungs*, *Stomach*, *Guts*, *Pancreas*, *or Membranous parts* be affected, 'tis not the *violence of the Diſeaſe*, but the *ignorance* of the *Attendants* which occaſioned *that*: which is *intolerable* for any man to ſay, and refuted by *Experience*.

Dr. *Sydenham*, p. 138.

I might proceed to demonſtrate that there is not *any thing new* in the whole *Cure* which Doctor *Sydenham* uſeth: that in the beginning of the *Small Pox*, before the *eruption*, being as ancient as *Bayrus*, it not derived from the *Arabians*: And the *reſt* hath been inculcated by an *hundred Writers*: provided the *Small Pox* were *gentle*: yet, as much as they have been for the keeping of them *moderately cool as to Air*, or *Diet*, before the *eruption of them*; yet I dare ſay our Doctor is the *firſt* whoever did imagine that the *longer* they were in coming forth the *better* it was. *Mihi quidem rationi conſentaneum videtur, ut quo diutius Natura ſeparationem molitur, ac perficit, dum modo ebullitio non omnino torpeat, eo certius atque univerſalius eadem ſeparatio abſolvitur.* For our beſt Writers, as *Mercatus*, *Augenius*, *Forreſtus*, *Sennertus*, *Riverius*, *Ronchinus*, and others, do avow, that the ſooner they appear, the better is the preſage. But all this while his diſcourſe extends no furtherr, than to that ſort of *Small Pox* which is mild and favourable, not accompanied with any perillous or *mortal Prognoſtics*. but ſhould any ſuch caſe happen, theſe *two Doctors* leave us in obſcurity, and we muſt *help our ſelves*, for they give us *little of aſſiſtance*.

In genere melius eſt variolos & morbillos icto, quam tarde erumpere. *Sennert.* de febr. l. 4. c. xii.

I ſhall therefore proceed to enquire what *directions* the moſt *judicious Writers*, and *Rules of our Art* preſcribe unto us in *this Diſeaſe*.

It is confeſſed that the *Small Pox* are ſometimes ſo mild as not to be accompanied with any *Feaver*, or evil *ſymptome* at all, ſo that the *Patient* need not be confined

fined (at leaſt is not) to his Chamber, and any *ſtrictneſs of Rules*: This is granted by *Avicenna*, *Rhaſes*, *Schenckius*, *Hollerius*, *Epiphanius Ferdinandus*, *Coyttarus*; and *Franciſcus Rubeus*, whoſe words are theſe: *Variolæ aliquando ſine febre, & aliquando cum febre mihi & placidiſſima, nonnunquam cum febre acuta, & quondoque cum febre maligna erumpunt.* In *this caſe* there is no doubt but the *Phyſician* may do *nothing*, and *ought to do little*, there being no need of his aſſiſtance.

Coyttarus de purpur. febr. p. 245.

Rubeus Nocturn. exer. 7. in Scholiis. p. 104.

It is confeſſed that *ſometimes* the *Small Pox* are attended with ſo *gentle a Feaver*, of the nature of a *Synochus ſimplex*, that the Patient may do very well, by the directions of Doctor *Whitaker*, and Doctor *Sydenham*. Yet muſt I add, that, *ſuppoſing the truth of theſe* two Caſes, I cannot conceive it proper to imagine that the *Small Pox* are *then* a Critical motion of Nature: there being in the *one juncture* no Diſeaſe whereof they ſhould be a Criſis; in the other no ſuch Diſeaſe as to diſcharge it ſelf in ſo *copious an evacuation*. The Notion of a Criſis in the production of the *Small Pox* will ſeem more *abſurd*, when we conſider how frequently it happens, that *notwithſtanding their coming out plentifully*, the Feaver doth ſtill *continue*, and increaſeth the dangers of the Patient. Beſides, How is it a *Criſis*, when there ſeldom proceeds any *Coction*, and when the *preceeding Diſeaſe* obſerves *no times*?

Of thoſe Diſeaſes which terminate by a *Criſis* there is a great *variety* in the *evacuation* inſuing thereupon, as an *Hæmorraghia*, *looſeneſs*, *ſweat*, *profuſion of urine*: but here, whatſoever the nature of the Diſeaſe be, a *Synochus ſimplex*, *putrid*, *malignant*, or *tertian* Feaver, the *Criſis* by the *Small Pox* is conſtantly the ſame: and the *expulſion* not only towards the *skin* and *habit of the body*, but every way, as on the *Stomach*, *Throat*, *Lungs*, *Guts*, &c. and after this *kind of Criſis* it frequently

quently happens that the Patient *dyes*, no *errour* intervening: whereupon *Joseph de Medicis* exclaims after forty years of practise. *Hei mihi, quoties malitiosæ variolæ me fefellerunt!* And *Augenius*, though he be inclined to the Opinion of Doctor *Whitaker*, to explain this *Crisis*, is forced to desert the vulgar notion of a *salubrious* Crisis, and include in its *definition*, even those that are *noxious*, saying out of *Galen*: *Crisis est mutatio quædam subita ad salutem, aut mortem:* and after all concludes thus: "*Hæc si vera sunt, ostendunt rectissime dixisse Arabes, variolas contingere* per "modum cujusdam Crisis; *siquidem modus quidam* "*est* particularis, *quo febris magna saneri crisi consuevit, longe distans ab aliis. Omnes enim aut per vomitum, aut per alvum, aut per urinas, aut per sudores* "*sanantur; ut hujusmodi febris nullo ex illis sanatur* "*modis, sed per solam superficiem, non extimam solum, ut* "*ardentes febres, quæ sudore copioso superveniente liberantur, sed extimam & intimam simul, utque sic per* "*abscessus parvos, quos pustulas nuncupavimus, ubique* "*procreatos. Nunquam alvi fluore, nunquam vomitu* "*sanantur; imo si forte adveniant, pessimum signum est.* But if we take *Crisis* and *Critical evacuations* in this sense, 'tis certain then that a *Physician* may and *ought* frequently to *intermeddle*, notwithstanding that *Nature* is already engaged *critically*, and the foundations of this *Doctor* are threby overthrown.

Joseph de Medicis apud *Greg Horst.* t. 2. p. 56.

Hor. *Augen.* de febr. l. 9. c. 5.

I add, that if the *motion* of the *Small Pox* be *critical*, then is not the *Small Pox* properly a Disease *of it self*, but the termination of one. And therefore the *Arabians* did prudently say, that the *Small Pox* do happen, *per viam cujusdam criseos*, in the way of a *Crisis*, not that they are properly the *Crisis* of *another disease*. They are generated by an effort of Nature, which dischargeth it self of certain humours which are offensive unto her by their *quantity*, or *quality*; and this is done not by their eruption in the *exterior parts*, but even

Avicenna de febr. c. 6. with whom agrees *Fracastorius*, and, I think, the generality of *Physicians*, who make it to bear some *resemblance* of a *Crisis*, but not a *Crisis*.

even in all the *entrails*, and other internal parts: and ſometimes this *evacuation* is a diſcharge of ſo *crude*, *malignant* matter, that it is *deſtructive* to the ſick: which is not uſual in a Criſis: and this is that which the Arabians call *Ebullitio ſecundum ſemitam putredinis*; which made *Fernelius* and others aſcribe thereunto a *venenate* quality. "*Hoc & morborum fœditas teſtatur, tam deformis aliquando viſa, ut occæcutis* "*oculis, univerſa cutis in ſquammas fœtidas & in cruſtas* "*ingentes ſolveretur: corpus omne non aliter contabeſ-* "*ceret & macie nigroreque torreretur, quam ſi menſes* "*quatuore furca pependiſſet.*

Fernel. de abdit. rer. cauſis lib. 2. c. xii.

It is avowed that there is more than one ſort of *Feaver* which is antecedent to the eruption of the *Small Pox*: and *common Reaſon* will tell us, that in ſuch caſes the *Phyſician* muſt vary his Method: if the *Feaver* be a *Synochus ſimplex*, without any *putrefaction*, 'tis not to be doubted but that the *Small Pox* may be cured by the courſe preſcribed by Doctor *Whitaker*, and Doctor *Sydenham*: but what if it be a *Synochus* joyned with *putrefaction*, or *malignity*? Muſt *we* then abandon *Nature* to her ſelf, and ſtand Idle Spectators amidſt ſo *great* and *viſible* dangers? If the *Small Pox* be a *Criſis* of the *Feaver*, what influence hath *that conſideration* upon us, before the time of the Criſis? Are we not obliged to *facilitate* and *ſecure* the *Criſis* by convenient means before it approach? May it not otherwiſe happen that there will be too great a *redundancy of humours*, ſo that Nature will not be able to *guide* them orderly, and for the benefit of the *Patient*? Do not *we* ſee this frequently to happen, where no *irritation* hath been through *Sudorifics*, or other *Medicaments*? Doth not it often happen, that Nature not being able to command the *turgent humours*, they have ſo fixed themſelves in ſeveral *principal parts*, occaſioning *Swoonings* or *Syncopes*, *Dyſenteries*, as to deſtroy the

Patient

Patient in the *beginning?* or ſo to imbecillitate *him*, that he hath afterwards languiſhed in a *Conſumption*, been deprived of his *eyes*, or *limbs*, and ſubjected to incurable *Ulcers?* It was obſerved in *Germany*, in 1644. that the *Small Pox* reduced ſome to an *Atrophy*, *Aſthma*, and *Conſumptive coughs:* ſome have had not only the *habit of their body* ſtrangely vitiated and altered; but even their *bones* corrupted and corroded into a *Pædorthrocace*, or *Spina ventoſitatis:* ſome have had the *Articulation* of their Joynts ſo depraved, that they have become *immoveable*, or *crooked.* Oftentimes we ſee that after the firſt *Feaver* is abated, and the *Small Pox* come out in *great plenty*, a *looſeneſs* follows, or a new *Feaver* prevents their maturation and *deſtroyes the Patient.*

Joh. Michael Febr. de Scorzonera. p. 81, 82, 83.

From theſe Conſiderations I dare confidently deduce this Concluſion, That it becomes a *Phyſician* in the *Small Pox*, to examine well in the beginning, the *conſtitution* of the Patients body, if it redound with *peccant Humours*, or *no:* it being eaſie to apprehend, that what is a *Cacochymy* before this Diſeaſe, will degenerate into a *virulency* and *malignity* in the courſe of the Diſeaſe: If it redound with *too much Blood*, as having more than is requiſite for the *commodious diſcharge of that Diſeaſe:* for if the body be *either way* Plethoric, there is apparent danger leaſt the Patient be *ſtrangled*, or that the *turgent Humours*, being either ſtreightned for want of room, or too *luxuriant* to be guided, will fall upon ſome *important part*, and ſo create *inſeparable evils* in the progreſs of the diſtemper. He ought alſo to inquire diligently into the *preceding ſeaſon of the year*; ſince that adds much to the *mildneſs* or *perilouſneſs* of diſtempers: As alſo into the *preſent ſickneſs*, whether it be in others attended with any thing of *unuſual malignity*, or *peſtilence*: for in ſuch a caſe, *he muſt increaſe his care, as dangers multiply.* He ought

Forreſt. obſ. lib. 6. obſ. 44.

ought alſo to weigh well the firſt *Symptomes*, whether they be ſo *violent* as that the *Patient* is not likely to have ſtrength to ſupport the *continuance of the Diſeaſe*: If the Feaver be *great*, and accompanied with *ſwoonings*; if the Patient being *thirſty*, *reſtleſs*, moleſted with a *vomiting*, *difficulty of breathing*, a *dangerous Cough*, *violent* and *ill-coloured Diarrhæa*, or *Dyſentery*, *bloody* or *black Urines*: It is not to be doubted in *theſe caſes*, but the *Phyſician* is to make ſuch proviſion, that ſo *ominous a beginning may conclude well*, if it be poſſible. And ſince ſo great a diſtemper requires *great* and *generous remedies*: two things will at firſt (if he come timely enough) fall under his debate; *viz.* *Phlebotomy*, and *Purging*.

Hor. Augen. de febr. l. 2. c. 1.

Concerning Purging many are very *timorous*, becauſe that a *Looſeneſs is dangerous in the Small Pox*: as alſo becauſe that they fear leaſt it ſhould divert the *Humours* from their *natural tendency*, and draw them into the *Bowels*. But neither of theſe Reaſons are of any great validity. For neither is a *momentany Looſeneſs* (and 'tis *that* which is equipollent to a *Minorative purge*) dangerous in the firſt beginning of the *Small Pox*, before they *come forth*: Nor is there any danger that a *gentle Purge* ſhould create a *Flux*; but rather *prevent* any ſuch *ſubſequent evil*, by carrying off the *peccant Humours*, which by *continuing* in the *ſtomach* and *inteſtines* would contract a *malignity*. And indeed *this conſideration* is of ſuch importance, that it ought to ſway a *Phyſician* to give ſome Lenitive in the *beginning*, when he ſees occaſion. Neither will *he* thereby divert Nature from the *expulſion*, but rather facilitate it, and by diminiſhing part of the *redundant Humours*, enable her to overcome the reſt with more eaſe: whereupon *Augenius*, *Ranchinous*, *Franciſcus Rubeus*, *Riverius*, *Gregorious Horſtius*, and other *excellent Practitioners* do take *this courſe*. And *Ballonius* obſerves:

Ballon. Epid. l. 1. ep 37. vide Forreſt. obſ. l. 6. obſ. 49.

" *An commode præſcribi poſſunt medicamenta anti-*
" *quam morbilli ſe produnt? An illa impediunt motum*
" *naturæ? Imo inopinato venam ſecuimus, & medica-*
" *mentum purgans dedimus, quibus die ſequenti, aut po-*
" *ſtridie apparerent variolæ, & melius multo habuerunt,*
" *quam quibus non auſi fuerimus idem exhibere: ſic pa-*
" *rum probabile, quod dicitur,* minus affatim erum-
" pere populas ſi corpus ante purgaveris.

As for *Phlebotomy*, were it not for *capricious humours*, or *indiſcreet fears* of ſome perſons, there could be no queſtion about the *legitimate uſe* thereof in *this* Diſeaſe. For there is not any *Indication* for *Blood-letting* which may not occurre in the Small Pox: And 'tis as *vain a ſurmiſe* to think that an *intelligent Practitioner* will do any thing *raſhly*; as 'tis an *irrational courſe* (though too common) to *cenſure* Men for the *ill ſucceſs*, when they act according to the *beſt of their judgment*, and the moſt ſolid Rules of their Art.

The preſent Controverſie includes *two* Debates: The one *Concerning Phlebotomy in the beginning of the* Small Pox, *before their eruption*: The other *Concerning Phlebotomy after their eruption.* In *both* which *caſes* I do avow, that *Phlebotomy* may be oftentimes *prudently*, and ſometimes is *neceſſarily* adminiſtred. I uſe *this manner of ſpeech*, becauſe that *Phyſicians* do make a *twofold uſe of Blood-letting*: One, *when the* nature *of the Diſeaſe and its* greatneſs *do abſolutely* require *Phlebotomy*, *as the moſt proper Medicine, and without which* in all probability *the Patient will run an apparent hazard of his life*: A ſecond, *when it doth not ſeem ſo* abſolutely neceſſary *to Phlebotomiſe the Patient, but he may recover by other means,* without it: *yet becauſe* this is the moſt rational and ſafe way, *Phyſicians do inſiſt* thereon, *that ſo Nature being diſburthened*

Ferdinand. Mena comment. in lib. de ſang. emiſſ. c. 22.

thened and alleviated in part thereby, may with more eaſe overcome the reſt. Thus in ſome Diſeaſes *Galen* profeſſeth he omitted to *bleed* ſome Patients, becauſe they would not indure it: whereas had he eſteemed it *extreamly neceſſary*, he would not have declined *that Remedy*, and uſed a *Purge* inſtead thereof: But he looked on it *then* only as a *moſt convenient* Remedy. From whence I deduce, that *whenſoever any man reads any Author that doth not practiſe Phlebotomy in the Small Pox* (as *J. Michael Fehr*, and one *Langius*, now Profeſſor of Phyſick at *Leipſich*, or *Angelus Sala*) *the* uſeleſsneſs *or* danger *of the Remedy is not to be concluded thereupon:* ſince it is evident that *Phyſicians* are inforced often to comply with the *Humours* and *prejudicate Opinions* of their *Patients*, and the *Countries* where they live; and do not *alwayes* act according to their *beſt judgment:* Nor doth it follow, that becauſe the *imprudence* of ſome hath been, or *is* ſucceſsful; that therefore we ought to relinquiſh the *more wiſe* courſes, or condemn as *needleſs* thoſe cares which *Diſcretion* it ſelf doth put us upon. Neither ought we to be ſwayed by the negative teſtimonies of *Writers*, or *Practitioners:* For it doth not follow that *what one* (or more) *hath not tryed, or ſeen*, is impoſſible, or impracticable: The *happy Experience* of the affirming party is the moſt convincing: as our common *Logick* informs us. They who condemn *Phlebotomy* in the *Small Pox*, either condemn it becauſe *they* have *experienced its evil effects* therein; or becauſe they have only a *ſiniſter opinion* of it, and ſome *ſpecious reaſons* againſt it: If the *laſt*; they ſay nothing of moment: it being the dictate of *Hippocrates*, Ὀφθαλμοῖσι ὃ δεῖ πιθέσθαι μᾶλλον, ἢ γνώμῃσιν. And *Ariſtotle* long ago cenſured thoſe who out of a *preconceived* opinion of the event of a thing did form their *judgment*; and imagine it *muſt* happen ſo, or ſo, becauſe they think it will do ſo. If they have ſo often *tryed the evil ſucceſs*

4. de ſaint. tuend.

De diæta, l. 1. c. 5

Frederic. Bonaventura de partu octomeſtri. l. 5. c. 64.

ceſs thereof, 'tis neceſſary that they confeſs *they have killed a great many* thereby: or at leaſt that they profeſs they have ſeen the *ſad Experiments* thereof made *by others*: and to make this *any way* convincing, they muſt firſt aſſure us that ſuch Experimentators were *Artiſts*, and underſtood their *Faculty* ſo well as to weigh *all circumſtances* requiſite to the *due adminiſtring of Phlebotomy*: otherwiſe the *Actions of the moſt judicious* ſhall be condemned through the *ignorance* and *folly of others:* and it muſt be demonſtrated, that the *death* or other evils which befell the ſick, were the *direct conſequences* of the *Phlebotomy*; and not *by accident*, and from ſome *particular juncture*, or περίστασις: leaſt we commit the Fallacy of *A dicto ſecundum quid, ad dictum ſimpliciter.*

p. 27. Doctor *Whitaker* is pleaſed to call the practiſe of *Phlebotomy* in the *Small Pox*, the *Mode of* France; and makes as if that were the *principal Argument* produced *for it.* viz. "*The greateſt Argument to confirm this* 'practiſe, *is*, the Mode of France: *by the ſame argu-* 'ment they would prove *ſtinking and putrid fleſh, both of* 'fiſh *and fowl to be moſt comfortable to the ſenſe, and* 'corroborative *to the Animal ſpirits: and if their Rhe-* 'torick *be no better than their Logick to perſwade per-* 'ſons *of reaſon and ſenſe to accept their* Mode, *it is* 'moſt *probable it will prove the* Numiſmata *of* Ga- 'len, *which is a quære that will paſs no further than* 'their *own Countrey.*——He afterwards call it the

p 28. raſh practiſe of Modiſh perſons: adding, "*I* 'call *it a* raſh *and* inconſiderate practiſe in this Diſ- 'eaſe, *becauſe it is a doubt indetermined amongſt the* 'moſt *learned Profeſſors of* all Nations, *both* Greeks, 'Arabians *and* Latines, *and* all others *principled* 'from *them*; *being* all of them *unreſolved of Phlebo-* 'tomy *in the Small Pox*, upon any Indication *to be a* 'ſafe Remedy: *And if the diſeaſe be conjunct with*

'an

an undeniable plethory of blood (which is the proper Indication of Phlebotomy) yet such bleeding ought to be by Scarification and Cupping-glasses without the cutting any Major vessel.——Assertions so *general* and *peremptory* as these are ought to be *very well grounded*, or else they subject the *Author* to the imputation of *Opiniatrity*, and *Ignorance*. I will not deny but *some* may have justified their *practise* by the *customary presidents* of the *French* Physicians; who neither want *sufficient knowledge* in their *Faculty*, nor *prosperous success* to urge against all *Cavillers*: And this they *may* have done, not that ever they could judge it a Mode peculiar to the French, but because that *Nation* is our next *Neighbour*, and so well known unto us, that they needed not extend their discourse *further:* nor do there want *reasons* to shew that *If it be requisite for the* French, *and they can bear it:* It is more requisite for us, and we can better tolerate it. For our *diet* is more *plentiful*, our *habit of body* more *firm*; our *innate heat*, by the coldness of our Climate, more *concentrated* and *vigorous*; our *redundance of blood* is *greater:* and our *pores* more *dense* and apt to be *obstipated*, than *theirs*; and if we may aggravate the malady from the *dismal effects* and impressions it produceth in the *faces* of the sick, I think I may say it (I never was in *France*) that the *Small Pox* are *worse* in *England* (which *indicates* greater Remedies, for the most part than in *France*, since the *disasters* which befall good faces are more *frequent* and *notorious here* than amongst *them*.

But, I do affirm that *this practise* is not only the Mode of France, but of *Spain* and *Italy* as well as *Ægypt* and *Africk*; and that 'tis *authentick* in high and low *Germany*, and *Denmark:* And whereas *he* sayes that *the usefulness of this Remedy, is a* Doubt *indetermined amongst the most learned Professors of* all Nations, *both Greeks, Arabians, and Latines; and* all others.

others *principled from them:* It is a groſs miſtake: and there is more of truth in that *oppoſite* ſaying of *Augenius*: "Omnes, *qui de variolis ſcripſerunt*, "unanimi conſenſu, *principium curationis, illarum* "*fieri debere a vacuatione ſanguinis contendunt, ideoque* "*venam incidendam eſſe, aut ſcarificationes adminiſtrandas, aut hirudinibus applicitis ſanguinis vacuatione procurandam.*

Hor. Augen. de febr. l x. c. iv.

Concerning the *Greeks*, I have conſidered the paſſage in *Hippocrates* concerning the Son of *Tmionax*, and whatever elſe is alledged out of *him*, or *Aetius*, yet cannot be ſatisfied that ever *they* knew any thing of *this diſeaſe*. They that do believe it (as a ſtrong *imagination* may tranſport a man *far*) may reply, that ſince the *Malady* was rare *then*, and different much from ours 'tis not to be wondered that they ſpeak ſo little of the *Cure*; and never *determine a doubt which they never thought of*. As for the *Arabians* nothing is more *certain* than that they conſidered *the diſeaſe*, and all *circumſtances*, and did determine in the behalf of *Phlebotomy*; and whoſoever is *principled from them* (as all in a manner of the ſubſequent Phyſicians have been) muſt allow thereof. I do not remember to have read that any of *them* did ever prohibit Phlebotomy in *this caſe*, except it be *Avenzoar*, who is ſaid to have given the like directions that Doctor *Sydenham* doth, *viz.* To do nothing *in a manner:* but relinquiſh the work to Nature entirely. How *Avicenna* determines the doubt, his words will beſt ſhew. "*Oportet in* "*variolis ut incipiatur, & extrahatur ſanguis ſufficienter, cum conditiones fuerint. Et ſimiliter ſi morbillus* "*fuerit cum repletione ſanguinis. Et ſpatium illius* "*eſt uſque ad quartum. Sed quando egrediuntur variolæ,* "*non oportet tunc ut adminiſtretur phlebotomia, niſi inveniatur vehementia repletionis, & dominium materiei:* "*tunc enim phlebotometur quantitate quæ alleviet, ſeu* "*minoret.* Et convenientius quidem, quod in hac "admi-

Hippocr. Epid. l 7. p. 894. cum notis *Valleſii*.

Avicenna de febr. c. 10.

c administratur ægritudine est phlebotomia. *Et si*
c *phlebotometur vena nasi, confert juvamentum fluxus*
c *sanguinis narium, & tuetur partes superiores a malitia*
c *variolarum. Et est magis facilis super infantes. Et*
c *quando necessaria est phlebotomia, & non phlebotomatur*
c iterum *complete, timetur super ipsum corruptio extre-*
c *mitatis.* Whence it is apparent, that amidst such circumstances as amongst Physicians usually seem to require *Phlebotomy*, he doth allow the practise thereof in the *Small Pox*, before they come out, be it on the *fourth day*, or *later* that they discover themselves. After they do appear, he alloweth not, except there be a manifest *plenitude*, and surcharge of morbific humours, then he alloweth only a *minute* letting of blood, and not what is *too copious*: and adds, that in *this disease* 'tis most convenient to let blood; and if the Patient be not blooded in a *Plethoric* constitution, and that by a *repeated phlebotomy*, according to the exigency of the case, that is, *compleatly*, there is danger least the party suffer the corruption or loss of some of his *limbs* by a *Gangrene*, or other evil accident: for when the redundance of the expelled matter is such, that it cannot duly *maturate* and *transpire* in the pustules, it frequently corrodes the *ligaments*, and *tendons*, and otherwise vitiates the remoter parts of the body; even Worms have been bred in a *pestilential* Small Pox, all under the pustules: as at *Stralesund*, in 1574. sometimes the matter not finding room to disburthen it self in the *circumference*, turns its course into the bowels, and begets mortal *Diarrhæas* and Dysenteries. Of the same opinion is *Rhases*, as appears by what is extant amongst the *Scriptores de febribus*: viz. " *Si antequam appa-*
c *rere incipiant, medicus ægrum inveniat, minuere eum*
c *faciat, aut cum ventosis sanguis extrahatur.* Minua-
c tur equidem sanguinis multitudo. It is true, that *there* he prohibites *Phlebotomy* after the Pox *come forth*: but I find him cited by others as concurring with

Joseph de Medicis apud *Greg. Horst.* t. 2. p. 46.

Fr. Joel. prax. l. 9. sect. 5. sect. 2.

Rhases (inter Scriptores de febribus) c. 18.

with *Avicenna* as to bleeding even at the *nose*, as extreamly beneficial; and to approve of *phlebotomy* after they come forth, in case the Patient find no *alleviation* thereupon, but there continue signs of a *plenitude*, or redundancy of ill humours, a great Feaver and difficulty of breathing. But there is another piece entitled unto *Rhases*, wherein how indulgent he is to *Phlebotomy* you may learn from *Augenius*. " Rhases *libro*
' *suo de peste, capite sexto* : *mittendum esse sanguinem*
' *vult pro quantitate plenitudinis* ; *si enim maxima fue-*
' *rit, non veritur vacuare usque ad animi deliquium* : *si*
' *mediocris, mediocriter educit* : *si parva fuerit, paulum*
' *sanguinem educit* : *verba ejus sic habent.* Tu ve=
' nam incidito, & quam multum sanguinis ef=
' fundito ; scil. ad sanguinis defectionem usque.
' *Supra vero syndromen attulit maximæ plenitudinis, &*
' *paucis interpositis inquit.* Cum vero hæc signa ad=
' modum evidentia non erunt, veruntamen ve=
' hementia quidem, parum sanguinis fundito :
' Sin minime, minimum : *hæc ille.* How successful so *large bleeding* may be (though *Augenius*, and *Ranchinus* and others condemn it, we may judge by the practise of *Botallus*. To these I add the authority of *Serapion*, which runs thus. " " *Si hæc febris fuerit*
' *propter causam variolarum, & virtus & ætas consentit,*
' *tunc* non aliquid magis juvativum quam phle=
' botomia venæ. *Et si aliquid prohibet phlebotomiam,*
' *tunc oportet ut administrentur ventosæ.* Out of which it is evident, that the generality of the *Arabians*, were of a *different sentiment* from what Doctor *Whitaker* ascribes unto *them* : and *Claudinus* is less mistaken when *he* (as do many others) avoweth, that The Arabians universally agree to let Blood in the Small Pox, upon occasion. Nor is there more of truth in that which follows in our *Doctor*, viz. that Their followers have not determined this doubt. For though *two* or *three* may seem refractory still in the

Rhases 18. Cont. 8. citante *Diomed. Amico* in tract. de variolis. c. x.

Horat. Augen. de febr. l. x. c. 3.

Botallu de venæ sectione, c. 5.

Serapion (inter script. de febr. c. 12.

I. C. *Claudinus* Empir. rational l. 5. sect 1. c. 1. p. 286.

the World, yet it is not amongſt *Phyſicians*, but amongſt them that are not *Phyſicians* that the doubt is indetermined. I ſhall take ſome pains to *undeceive* this Age as to the *preſent point*.

Gordonius's words are theſe; " *Inprimis ſi corpus* " *eſt Plethoricum, aut ſi ſanguis dominatur, aut virtus eſt* " *fortis, fiat Phlebotomia de mediana, & poſtea de ſum-* " *mitate naſi*: i. e. In the firſt place, if the body be plethoric, or if the Diſeaſe be ſuch as is attended with abundance of blood, or if the Patient be ſtrong, let him bleed firſt in the middle vein, and afterwards at the Noſe.

Gordonius; lilium Medicinæ, part. 1. c. 12. de variolis.

Petrus Bayrus having repeated the ſigns of the *Small Pox*, when they are violent, adds: " *His apparenti-* " *bus ſtatim fac Phlebotomiam copioſam, prius ſcilicet* " *quam variolæ ad extra appareant: licet poſſit fieri eti-* " *am ipſis incipientibus apparere, ſtante multa repletione;* " *non tamen tunc fiat ita copioſa, ſicut ipſis non apparen-* " *tibus: dicente Avicenna, in caſu*, Extrahatur ſanguis quantitate quæ exiret, hoc eſt minuet: *i. e.* when the *Small Pox* begin with ſuch a *vehemence of ſymptomes*, preſently take from the Patient a *large quantity* of Blood, before the *Small Pox* begin to come forth: yet may he alſo be *let blood* after they begin to appear, if there be a great repletion, but yet not in ſo *large a manner* as otherwiſe: for ſo *Avicenna* directs in the caſe: *and let the Patient bleed in ſuch a quantity* as may dry the *habit of his body*: that is, you may *leſſen the quantity* of the morbifick matter, ſo to bring them forth to a *kind maturation*, but not ſo as to *divert Nature* from her work.

Petrus Bayrus de peſt. in capite de *variolis* & *morbillis*.

I ſhall not trouble my ſelf to repeat the words of others at large; but refer my Reader to the places cited. *Horatius Augenius*, one of our beſt Writers upon the *Small Pox*, (and who proteſts he writes nothing in order to *its Cure*, but what *ſix and forty years*

Hor. Augen. de febr. l. x, c. 9.

[d.ibid.c.3.] Experience had convinced him of *to be good*) doth allow, in difficult cases, and when the Disease is somewhat *pestilential*, that the Patient *bleed* first at the *Arm*, and then at the *Nose*, by irritating it with *Yarrow*, or *Horse tayl*.

I. *C. Claudinus* Empir. ration. l. 5. sect. 1. c. 1. *Dilectus Lusitanus* de venæ sectione. c. xi. Artic. 1. p. 145. *Epiphanius Ferdinandus* cas. Medic. 78. *Æmil. Campol.* de variolis, c 413.

With him agrees the *cautilous* and learned Practitioner *Julius Cæsar Claudinus*: who doth debate, and *determine this doubt*: as also doth *Dilectus Lusitanus*, in his Treatise of *Venæ-sectione*: and *Epiphanius Ferdinandus*, and *Æmilius Campolongus*. Neither is it to be questioned, but that *this* is the *common practise* of all *Italy*; so that I shall cite no more of that Nation.

Christo. a Vega de arte med. l. 2. sect. 7. c. 1: *Lud. Mercatus* de puer. morb l. 2. c. 22 Vide etiam *Ludo. Mercat.* de febr. l. 7. c 3 & de recto Medicinal. præsid. usu. l. 1. c. 4. & *Anton. Ponce Sanctacruz*, de impediment. magn. auxil. l. 3 c. 18.

In *Spain* 'tis approved of by *Christophorus a Vega*, whose words are these. " *Si vero lactæ fuerint variolæ, & ab humore fiant crassiore, ab initio sanguinem* " *mittere, si febris adfuerit; sine ipsa vero minime.* And the best of Writers, *Ludovicus Mercatus* is thus peremptory in his Resolution. " *De sanguinis* " *detractione nullus usquam dubitavit, aut id sine ratione* " *fecit, nisi aut vires sint adeo dejectæ, quod neque minimam, citra majus damnum ferre possint, aut affectus* " *adeo levis, aut benignus existat, quod satius sit naturæ* " *committere, quam ipsam infirmare sanguine misso, vel* " *sanguinis copia adeo parva, quod exquisitiori victus in-* " *stitutione securius rem possis agere quam aliis præsidiis,* " *quæ licet aliquo modo possint convenire, non subinde* " *sunt ita secura & certa, quod eis prorsus fidendum sit.* *i. e.* Concerning *Blood-letting* no man ever did *doubt* thereof, or if he did, he did it without *any reason*, except the Patient were so weak that he could not *endure it* without greater hazards, or that the *disease* were so mild and benign, that it seemed better to leave all to the strength of Nature, without debilitating any way the sick person, or the *redundance of blood* and *peccant humours* so inconsiderable, that the Cure might be wrought

wrought by a *diligent attendance* and *well-ordered* diet, without employing any of thoſe Remedies which how *convenient* or *ſafe* ſoever, yet (according to that *fate* which diſpoſeth of *all humane affairs*) may ſometimes have an *evil iſſue*, and are not therefore *needleſly* to be *preſumed upon*.

In *Portugal* I find *Rodericus a Fonſeca* to approve of *Phlebotomy* in *this diſeaſe*: As alſo *Stephanus Rodericus Caſtrenſis* avoweth its *utility* upon his own *Experience*.

Roderic. a Fonſeca in appen. ad *Jacchin*, de febr. c. 54. & Conſ. Medic. l. 1. conſ. 48. *Steph. Roderic. Caſtrenſ.* Quæ ex quibus, l 3. c. 16.

I might add *others*, but that this is the *general practiſe* of *Spain*, is ſo *indiſputable*, that I ſhould but abuſe the *patience* of my *Reader*.

I now come to *Germany*, and *Denmark*, where the moſt *learned*, and the moſt *eminent* Phyſicians that we hear of, have admitted of this *Remedy*. The beneficialneſs thereof was *experimented* by that famed Practitioner, *Forreſtus*. "Solet enim mirifice prodeſſe "in hoc affectu hoc auxilii genus, modo tamen "fiat in principio, antequam morbilli aut vari"olæ egrediantur. *i. e.* It is uſually of *marvellous* benefit to the Patient, if he *bleed* before the *Small Pox* or *Meaſils* do come forth: Whereupon *he* did ordinarily begin his Cures *therewith*, and ſaith, that undeniably it ought to be ſo, if all *requiſite circumſtances* concurre. Felix Platerus (a man of *principal eſteem* in *Switzerland*, and *Germany*) recommends it to our practiſe, "*Sanguinis detractio per venæ ſectionem in* "*brachio facta ab initio, ſi Synochi hæ ſunt febres, cu* "*juſcunque generis, ad ſanguinis accenſi, vel ſimul putri*"*di, vel maligni etiam portionem educendam, cauſamque* "*ſic minuendam, in adultis plurimnm competet. Quæ* "*& infantibus majoribus, cum in minoribus natu non li*"*ceat, non inutiliter adminiſtraretur. Quæ tamen, ſi* "*jam maculæ & puſtulæ eruperint, ne naturæ motus impe*"*diatur, omittenda erit.* i. e. Bleeding in the Arm,

Forreſtus obſ. lib. 6. obſ. 47. in Scholio: & ibid. obſ. 46, 49.

Felix Platerus t. 2. de cur. variolar. inter opera, p. 200.

when it is practiſed in the *beginning*, if the *Feaver* be any kind of *Synochus*, ariſing from the inflammation of the maſs of blood, or its being putrefied, or vitiated by any *malignity*, will be of great benefit to thoſe that *are of Age*, to leſſen the morbific matter, and abate the violence of the cauſe of the diſtemper. It might alſo be done to *Children* of ſome bigneſs (not to *little ones*) may be profitably. But if the *Pox* be coming forth it is to be forborn, leaſt it cauſe them to *retire in*, Neither is it a common Elogy for this practiſe, that *Gregorius Horſtius* commends, and juſtifies *it*.

Greg. Horſtius oper. medic. t 2. l 6 in append. de *variolâ*: & ibid. de febr. l. 1. Que ult.

And his learned Son, *Jo. Daniel Horſtius* aſſerts the the judgment of his *Father*. As cautelous as *Sennertus* would ſeem, he only doubts concerning *Phlebotomy* in *Children*, not in others. "*Si tamen in ætate, quæ* "*venæ ſectionem perferre poſſit, ſanguinis abundantia ve-*"*næ ſectionem poſtulet, mox in principio ante quartum* "*diem, aut ſane prius quam variolæ erumpant; dum vires* "*adhuc conſtant, & ſanguinis tanta copia ad ambitum* "*corporis confluxit, vena aperienda, ut natura oneris parte* "*levata, quod reliquuum eſt facilius vincere poſſit. Poſt* "*quartum autem diem, & ubi maculæ erumpere incipiunt,* "*abſtinendum a venæ ſectione; inprimis ſi jam æger* "*melius habere incipiat, ne materia ad ambitum corporis* "*tendens ad interiora revocetur.* i. e. But if the *Age* of the Patient be ſuch as to be able to endure *Phlebotomy*, and the *redundance of blood* be ſuch as to make *that Remedy* neceſſary, a Vein muſt be opened before the fourth day, and whileſt yet the *Small Pox* are not come forth, the ſtrength not being yet impaired, and the blood ſo *immoderately* diſcharging it ſelf upon the exteriour parts of the body: that hereby Nature being diſburthened of a part of what moleſted her, may the more eaſily concoct and ſubdue the reſt. But *after the fourth day*, and when *they* begin to come forth, *Phlebotomy* is not to be uſed, eſpecially if the Patient ſeem alleviated, leaſt *thereupon* the matter be drawn back

Sennert. de febr. l. 4, c. xii.

Jo. Dan. Horſtius epiſt. x.

back which was haſtening unto and fixed in the habit of the body. To theſe may be added *Baldaſſer Timæus*, Phyſician to the Elector of *Brandenburgh*, who after *thirty ſix* years of practiſe approved *this courſe*: and *J. Petrus Lotichus*: as alſo the younger *Sebizius*, now Profeſſour at *Jena*; and *J. Chriſtianus Frommanus*, a Phyſician in *Saxony*: and *Franciſcus Joel*: In *Denmark* I find *Bartholinus* to be reſolute *for it*, before the *Small Pox* do come out: and if they do not come forth kindly, but that ſymptomes of an *evil preſage* multiply upon the Patient, he allows a *minute* bleeding then, and ſayes many have been *happily* recovered *by theſe means*. And ſo much for *Germany*.

Baldaſſar Timæus conſ. medicin. l. 8. c. 29.
I. Petr. Lotichius lib. 1. obſ. medic. c. 7 obſ. 13.
D. *Sebizius* diſp. de variolis ult. qu. 4.
I. Chriſt. Framman. diſcurſ. medic. ſect. 97 103.
Fr. Ioel pract. l. 9. ſect. 5. § 2
Th. Bartholin. Ciſta Medica, p. 60. Alſo *Hoeſerus* Herc. medic. l. 7. c. 6. and S. *Heſenreffer* de morb. cut. l. 2. c. 4.

In *England* the paucity of our Writers upon *this ſubject* gives me no opportunity to defend Doctor *Willis* by the citation of *any Book*: 'tis enough, that ſince the *original* and *firſt records* of the Diſeaſe no other *Method* than what he purſues, hath been commonly propoſed: that the *generality of the world*, the *wiſeſt of Phyſicians*, the moſt *able* and *judicious* of our Profeſſors principled by *Avicenna*) do approve thereof: 'tis not bare complyance with the Mode of France, but the Dictates of Reaſon, confirmed by a *proſperous ſucceſs* in ſeveral to *my knowledge*: I would fain ſee any man juſtifie the *Rhodomontade* of Doctor *Whitaker*, by producing ten *Phyſicians* that reject *Phlebotomy*: I remember none but *Fracaſtorius*, *Langius*, *Rolfinckius*, and *Denſingius*, and one or *two more*, and a company of *old Wives* and *Nurſes*. I never yet *Phlebotomiſed* any; yet 'twas becauſe I either had no *exigency* for it, or the Patients were too *timorous* to admit of it. But were *my own life* concerned, I would undergo it: and I hope the *Baconical* Philoſophers have not ſo *irrecoverably* infatuated *this Nation*, but that we may come to be

be undeceived in this point, as well as we have been *in others.*

Although it be not my intention to write an *intire Tract* about the *Small Pox*, yet that I may demonstrate the *Rationableneſs* of their procedure who do *let blood* in the *Small Pox*, 'tis neceſſary that I acquaint my *Reader* with thoſe *caſes* wherein they do apprehend themſelves *obliged to act as they do.*

In the cure of the *Small Pox*, whenſoever a *Phyſician* employes his thoughts about *Phlebotomy*, he conſiders the *Feaver* which attends it; and the *dangers* into which the Patient is likely to fall: and the *ſtrength* he hath to bear them: not to mention thoſe *conſiderations* which ariſe from the *general ſeaſon* of the year, or the *particular malignity* of the Diſeaſe at *that time*, or the *idioſyncraſy* or peculiar temperament of the *ſick*, or what is *ſingular to ſome families.* In the *Small Pox* there happen frequently *three ſorts of Feavers*: one in the *beginning*, which uſually terminates on the *fourth day*, or when they *come forth*: Another which begins when the *Small Pox* begin to come to *ſuppurate*: according to that old ſaying, *Febris fecit variolas, & variolæ febrem.* And a third, which either ariſeth afreſh upon *their coming forth*, or is the continuance of the *primary Feaver*, which if it abate not upon their eruption, creates *new cares* and troubles in the *Phyſician.*

As to the *Feaver* which is antecedent to the *Small Pox*: though *ſometimes* there be *none* at all: and *ſometimes* it be ſo *gentle* as not to create any *miſ-apprehenſions* in the *Doctor*, or *Sick*; yet frequently it happens to be joyned with *putridity*, or *malignity*, or to have ſomething of the *Peſt* it ſelf: From all *theſe circumſtances*

cumſtances the *cure* muſt be varied; nor is it any diſparagement for a *Phyſician* to act one thing at *one time* which he doth not *at another*; and to recede from *vulgar Methods* in *extraordinary caſes*. In ſome caſes he need not *phlebotomiſe*, if he ſee no *violent Feaver*, no pernicious or dangerous ſymptomes: if it be either a *Tertian*, or *double Tertian*, or *Synochos ſimplex*: the danger ſeems leſs: yet is it a *certain obſervation*, that oftentimes in the *Small Pox*, the moſt *hopeful beginnings* are defeated by *ſudden* and *ſubſequent* acdidents: ſo that very many of thoſe whoſe recovery hath been undoubted at firſt, have in the progreſs and concluſion of the Diſeaſe died. "*Hoc primum ſciat & conſideret,* "*præ oculis ſemper habeat prudens & diligens Medicus,* "*nimium fidendum non eſſe plurimum in variolis &* "*morbillis, quantumvis ſalutaria ſigna primo acceſſu ap-* "*pareant: nam in receſſu & inclinatione facillime in* "*mortem commutantur: talis eſt horum morborum frau-* "*dulentia & conditio.* Beſides this, it often happens that a *ſalubrious* and ſimple *Synochus* turns to one that is *putrid:* and then the danger is, leaſt what is intended by Nature for a *depuration of the Blood*, become *corruptive*, and ends in the *death* of the *Patient*. Alſo it is frequently ſeen that the *exorbitant matter* is ſo *much*, or Nature ſo *weak* as not to diſcharge it into the *habit of the body*, or there is ſome *particular imbecillity* in the *principal* parts, that the Diſeaſe ſeizeth on the *Lungs* ſo violently as to exulcerate them in the progreſs of the Diſeaſe, or ſo debilitates them that the Patient languiſheth in a *Conſumption*; or elſe it ſettles in the *Glandules* of the *Throat*, and the Patient dyes of a kind of *Squinancy*, according to *Avicenna*. "*Nam qui ex* "*variolis moriuntur, inquit Avicenna, plerumque ex an-* "*gina ſuffocati pereunt, orta minium inflammatione in* "*gutture.* Sometimes the matter taketh a wrong courſe, ſo as that a *Flux* enſues, which ſometimes becometh *bloody:* and this befals the Patient either before

Lud. *Mercatus* de puer morbis, l. 2. c. 22.

Diom. Amicus tr. de variolis, c. 8.

fore they come out, or a little after they have appeared: or in the *declination:* in all which cases, 'tis a *bad sign*: but in the *last*, commonly mortal. "*Si debet*
Hor. Augen. de febr. l. x. c. 8. "*hujusmodi res experientiæ judicio terminari, hæc fi-*
"*dem faciet, fluore in declinatione adveniente, etiamsi*
"*non sit exulcerationis, majorem ægrotorum partem mori.*
Sometimes the matter is so *acrimonious*, that it *corrodes the bones*, as *Paræus* testifies upon *his knowledge.*
Ambr. Paræus Chirurg. l. 9. c. 1. "*Quinetiam animadvertere licet in plerisque hujus*
"*morbi malignitate mortuis & dissectis, eum in principi-*
"*bus partibus invehi corruptionis impressionem, quæ hy-*
"*dropis, phthiseos, rauvicitatis, asthmatis, dysenteriæ*
"*ulceratis intestinis, ac tandem mortis consecutionem at-*
"*tulerit: prout pustulæ pari rabie debacchatæ sunt, quæ*
"*per corporis superficiem furere cernuntur: non enim*
"*externas modo partes deturpant, pustularum & ulcerum*
"*altius sese in carnem defigentium impressionibus & ci-*
"*catricibus relictis, sed & sæpe movendi facultatem*
adimunt, arrosis & labefactatis cubiti, carpi, genu & pe-
"*dum dearticulationibus. Quinetiam multi inde viden-*
"*di sensum amiserunt, ut nobilis Do. Guymeneus; alii*
"*audiendi, alii olfaciendi, oborta hypersarcosi in meatu*
"*tum narium, tum aurium.* There being so *great danger* in this *Malady*, I wonder that Doctor *Whitaker* should ever look upon it as contemptible: saying,
"*This disease of the* Small Pox *was anciently and*
"*generally in the common place of* Petit *and* Puerile *diseases; and the Cure of* no moment. It is true that *Physicians* do usually reckon it amongst the *Diseases incident to Children:* and they do believe that *Children* pass it over with *less danger* than more *adult persons:* because in *them* the *Humors* are not so *accrimonious* as in others: their *habit of body* is more *lax*, and gives the humors a *freer course* through the flesh, their skin is more *perspirable*, and their *innate heat* more *vigorous* than in others: It is also true, that *they* do hold that *sometimes* the *Small Pox* are so mild, that

there

there is *little* or *nothing* to be done by the *Physician*: But 'tis no less true, that from the dayes of *Avicenna* and *Rhases* unto ours, none ever *thought* or *writ*, that the *Cure* was absolutely of *no moment*. For *Avicenna* in his Treatise of the *Small Pox* represents unto us a great deal of *danger* in the Disease; and though he grant it is sometimes *facile*; yet he cautions the Reader sufficiently how *malignant*, *perillous* and *mortal* it is at other times. *Horatius Augenius* and others aver, that this *Ebullition* is sometimes such as tends to the *depuration* and *perfecting of the blood*; and sometimes to its *depravation* and *putrefaction*: And as they compare the *one* to the *ebullition* of *Must*, by which it is improved unto *good Wine*, so they compare the *other* to those *effervescencies* in *Wine* when it *frets*, and degenerates. Neither is Doctor *Sydenham* less mistaken, when he forbids the *Physician* to make use of any *generous Medicaments*, but to leave the *whole work to Nature*, and to proceed according to that *Regimen* which he suggests; he representing the *disease* as *facile* in it self, and only *mortal* or *dangerous* by the *errors* of the *Nurse*, or *Physician*: Whereas it is evident that the Small Pox are at some times accompanied with *greater danger* and *worse Feavers* than at other times: and all that difference which is to be seen in the *Pox*, that they are *green*, or *livid*; *flat*, or *high*; *horny*, or more *soft*; *few*, or *so numerous* as to over-run the whole *entrails*, as well as *skin*, and there to *run one* into another, and *flux*; this doth not arise alwayes from the *miscarriage of the Attendants*, but from the *malignity* and *quantity* of the *morbifick matter*; as *observation* and *common reason* will inform any man.

Avicenna de febr. c. 6.

Hor. *Augenius* de febr. l. 9. c. 4, 6,

Let us therefore judge better of those *sage Practitioners*, who proposed unto themselves *sundry scopes* in the cure of *this disease*: and thought it their Prudence to prevent all the *dangers* imminent or *present*, by a cure like unto *this*.

First, They examine the *habit* of the Patients *body*, if it abound with *blood*, or *evil humours*: the *redundancy* of the former they conceive may be such, that upon a *violent ebullition* Nature may not be able to rule *it*, but either *some vessels* may *break*, or the Patient be *strangled* by a decumbiture of the *blood* upon the *Lungs*, or *Brain*, or a *bloody flux* ensue, if it take its course *that way*; or a *bloody urine*, if it incline to the *Kidneys*. The *renundancy of evil humors* they do apprehend to carry this hazard in *it*, that it may pervert the whole *mass of blood* upon the febrile effervescence, and add such a *malignity* to the *morbifick* matter in its *expulsion*, that the evacuation thereof by *pustules* may not put a *period unto that Feaver*, but *continue* or *exasperate it*, to the *mortal danger* of the Patient: such *evils* they think may *easily* be prevented by a *due method* in the *beginning*; but in the *progress* of the Disease, they are either *remediless*, or not to be cured but with *much difficulty*. Therefore their first intention is to lessen that plenitude of Blood, and other humors, which they find in the Patient.

Secondly, They examine the Nature of the *distemper*, what the *Feaver* is, whether a simple Synochus, or one that is putrid; a *causos*, or *continued tertian*: They consider the *violent symptomes* what *faculties* they effect, or what *parts*: and according as they see occasion they apply themselves to *correct* its malignity, or to *moderate* its *fervour*; without indeavouring to extinguish the *Feaver*.

Thirdly, They consider the danger that the *Eyes*, *Throat*, *Lungs*, *Stomach*, *and Intestines* are in, should the *Small Pox* affect *them*: they know that if *they* be driven forth into the *habit of the body*, and those other parts kept *inviolate*, there is *little of danger*

Fuerint ulcera maligna in faucibus, in aspera arteria, in æsophago, in intestinis sæpenumero, quæ hominem non multo negotio de medio tollunt. Hor. *Augen.* de febr. l. x. c. 2.

danger: but on the contrary, if the *humors* discharge themselves on them, now all other fears vanished, yet upon the *suppuration* (which brings a *new Feaver*) horrible symytomes must ensue in the *Stomach*, *Bowels* and *Lungs*. And therefore they think it ought to be their care to *mitifie the humors*, and *fortifie those parts*.

Fourthly, They consider the *manner* of their *eruption*; and if they *come out kindly*, they intermeddle not: If they either come out *slowly*, and in the mean time create *Epileptick* and *convulsive fits*, or other *dangerous symptomes*, they promote their *coming out:* and according as they perceive by their *colour*, and other signs, that they are *malignant*, they apply themselves to amend those defaults: If they find Nature to exorbitate in their *expulsion*, and that they come out so *thick* that there is not *sufficient room* for them, but that they run one into another: If the *Feaver* continue, or *increase*, because that destroyes the *due suppuration* of the *pustules*, they apply themselves to *moderate the excessiveness of that evacuation*, and to *correct that Feaver*, which is not to be terminated by any *new excretion of that kind*, but to be cured in a manner as other *putrid Feavers* are: and in this case all *judicious men* must allow no greater regard to the *Small Pox*, than a *symptomatical evacuation* deserves.

Fifthly, They imploy their care in *securing* such parts as are particularly indangered by *their eruption*; expedite the *maturation of them*, if it be to *slow*, and *difficult*; hinder their *regress*, and suffer not any *recrementitious particles* again to *reincorporate* with the blood, and *beget a new Feaver*, or other *dangerous symptome:* and in case any *new distemper* happen (as sometimes a *Pleurisie*, or the like may do) they provide for the *due cure* thereof.

These are the *common intendments* of all rational *Physicians*: these things Doctor *Willis* (whose short discourse of *this disease* contains in a manner all that our best Writers do suggest) doth propose to himself: and whosoever doth ponder well the *course of the disease* must assent thereunto. Let the *Motion* be *critical*; all intelligent men know, that before the *Crisis*, if we perceive any threatning danger, that Nature cannot command the *exorbitating humors*, but that the *present Symptomes* are perillous, and the *future issue* uncertain: If the *Crisis* be *immoderate*, and not agreeable to our desires; If it bring no *alleviation* to the Patient, our hands are not bound up, nor are we prohibited to intermeddle even by *generous Remedies*. As little are we confined by the *Hypothesis* of Doctor *Sydenham*: for, *if Nature be inclined to change the state of the blood*, yet are we obliged to assist her, if she be too *weak*, and *deficient*, or *exorbitant*: and our *providence* hath the same liberty to exert it self, that any *other principles* indulge it in.

I come now to *those Means* by which *Physicians* principally are said to act: and those are the great Remedies, of *vomiting*, *gentle purges*, and *bleeding*; and to declare the usefulness thereof; 'tis necessary that we consider the *Small Pox* under a *twofold* notion. As the Feaver precedes; and as those Pustules do *accompany* it: I think those *Physicians* to have written most discreetly, who divide Feavers into *two sorts*: viz, Febres solitariæ, and Febres comitatæ: these last they distinguish from *symptomatical Feavers*, in that *those* do *succeed* others and depend upon them as *their Causes*: but these others do *precede* some other distemper, or *arise* with it, and are either a *cause* or *occasion* thereof: and upon the appearance of their *companion-disease* they cease or abate: such are *Squinancies*,

cies, *Peripneumonies*, *Pleuriſies*, the *Small Pox*, &c.
" *Comitatæ febres continuæ ſunt, quæ aliquem mor-*
" *bum qui ipſas vel exitavit, vel qui ab illis prodiit, comi-*
" *tem habent, aliaque præter ea quæ febris ſolitaria af-*
" *fert ſymptomata, a morbo comite prodeuntia, & cum*
" *febrium accidentibus complicata, febriumque naturam*
" *aliquando permutantia.* In this *diſtinction* we are freed from thoſe *impertinencies* which others moleſt us with, as if the *concomitant diſeaſe* were a *criſis* of the other: whereas indeed this *concomitancy* makes us look on them rather as a *complication of maladies*, than any ſuch *ſucceſſion* as is feigned; and we are thence obliged to conſider what *indications* ariſe from this *conjunction:* for it is confeſſed that in *theſe caſes* the *primary diſeaſe* is not *terminated*, nor *altogether* to be *cured* in the usual manner, but with a regard to its associate; but our care ought to ſpend it ſelf ſo as that the primary Feaver may *innocently* and without prejudice to the *ſick* introduce its Associate, and that *conclude* with an happy recovery. To do this we conſider the nature of the *primary Feaver:* which is in the Small Pox a *ſimple Synochus*, or a *Synochus putride*; and ſometimes a *Tertian*, or *double Tertian*, or ſome *malignant Feaver*. Theſe we are ſo to manage that they neither become *exorbitant*, ſo as to deſtroy the Patient before the *Aſſociate* diſcovers it ſelf, nor *then* become ſo *depraved*, *violent*, or *malignant*, as to diſturb the *ſubſequent cure:* No man can *in reaſon* doubt but the beſt and moſt direct means to moderate the *primary Feaver* is to begin betimes; for then the diſtemper is leſs *violent*, and Nature leaſt debilitated: What we are to do *then* the *courſe* of the Diſeaſe beſt teacheth us; in which the moſt *enormous vomitings* are ſo far from *doing hurt*, that they are *beneficial* to the ſick: It is therefore manifeſt that a *Phyſician*, who is to *imitate Nature*, may in the *beginning* (as he ſees occaſion,

F. Platerus prax. t. 2. p. 13 de febr. generibus.

Hippocr. l. 2. Aphor. 29.

cafion,and upon due pondering of all circumſtances) adminiſter a *vomit :* for, it is neither repugnant but *congruous to any of thoſe primary Feavers*; nor *contra-indicated* by the *Aſſociate* : For hereby thoſe *excrementitious* humours are evacuated,which would otherwiſe in the progreſs of the diſeaſe add to the diſtemper,producing *Phrenſies* , *Sopors*, or other *malignant ſymptomes*; alſo part of the ſuper-abundant *turgent matter* is exhauſted,and the *Lungs* (who are frequently endangered by a *Catarrh* in the beginning) are diſburthened : as alſo the *eruption* of the *Small Pox* is facilitated: Vomits being alwayes held by the *Methodiſts* amongſt thoſe Medicaments which principally *relax* the habit of the body. In caſe that there appear urgent Reaſons againſt a *Vomit :* the next thing under conſideration, is a *Minorative purge*, whereby the *Stomach* and *Inteſtines* being cleanſed, and part of the Morbifick matter diſcharged from the *Head*, *Lungs*, and *maſs of Blood*, Nature will be better able to overcome and regulate what remains. And herein the *Phyſician* is guided by Nature, which oftentimes alleviates the Patient by a ſlight *Diarrhœa* before the *Small Pox* do come forth : Nor is there any danger in *ſuch fluxes*, as our Practitioners obſerve : *Si Diarrhœa fuerit in principio non nocebit.* And moſt of them allow a *gentle befitting purge* in the beginning of this Diſeaſe,not doubting thereby but to make the ſubſequent courſe of it to be more *benign*, and *ſafe* ; for the moſt turgent urgent bilious and acrimonious humors being carried off together with the *promiſcuous fæculencies* of the Inteſtines; 'tis not eaſie to be imagined that any *dangerous malignity* can reſide in the *puſtules*, or any *dyſentery* or flux enſue in the *ſtate* or *declination* of the Diſeaſe; at what time it is *extreamly perillous.* I ſhall not inlarge upon *this ſubject* further (it not being my preſent intention) but refer my

T. Bartholinus de augin. Epidem. exercit. 4. p. 56.

Epiphan. Ferdinandus caſ. medic. 78.

my Reader, for his more *particular inſtruction*, to *Horatius Augenius*, *Ranchinus*, *Gregorius Horſtius*, *Sennertus* and *Riverius*: and if he deſire *Experiments* for the happy uſe of *Vomits*, and *Purges*, and evidence that *they* do not retract the humors from the *circumference* to the *center* (Alas! 'tis not the time of their *ſeparation* or *motion that way*!) or impede their *eruption*, let him conſult *Angelus Sala*, and *Forreſtus*.

Angel. Sala ternar. Bezoart. c.viii. *Forreſtus* lib.6 obſ. 49. cum Scholio.

I come now to the practiſe of *Phlebotomy*, about which ſundry Queſtions ariſe: As, *Whether it may be 'adminiſtred in the beginng of the Diſeaſe?* and *After the Pox come forth? In the State?* and *Declination?* In all which *times* I do aſſert that there may happen ſuch circumſtances as may make it *neceſſary*: But in the *beginning* I think it may frequently be done with *great convenience*.

1. In the beginning of this Diſeaſe: that which *urgeth* is the *Feaver* and its *ſymptomes*, which if it be ſo violent that the Patient may be *indangered* before the *Small Pox* do come forth, or ſo *debilitated* that Nature may not be able to command *them* and concoct them by reaſon of their *multitude* or *virulency* (which the *extremity* of the *Feaver*, as well as *habitual cacochymy*, or the *adventitious malignity* may create) 'tis prudence in the beginning to prevent thoſe perils, which in a ſhort ſpace will become remedileſs. If the body be *Plethorical* with either ſort of *plenitude*, 'tis indubitably requiſite to *bleed*: and our caſe *here* is like to thoſe caſes which poſſeſs the *Brewers*, or *Vintners*, who whileſt they attend diligently to the *depuration* and *fermentation* of their liquors: employ a part of their thoughts upon the *preſervation* of the *Cask*, leaſt it break.

Greg. Horſtius de variolis & morb.

Nor is the *preſent plenitude* only to be conſidered, but the *future*, which will happen upon the increaſe of the

the *ebullition* and *attemuation of the blood*, together with the *defective tranſpiration*, which alwayes abates proportionably to the greatneſs of the *Feaver*: and in caſe any *peril* threaten from the *violence of the Feaver*, there doth not appear any more ready courſe (in ſuch as are ὁμότονοι, or in the beginning are at their height, perhaps there is no other) then to *let blood*; whereby the *redundancy* is diminiſhed, the courſe of the *blood* diverted from *circulating* or *ſtagnating in the inward veſſels*, the *habit* and *texture* of the body changed in order to the more *facile expulſion* of the *Small Pox*, and tranſpiration promoted, then which nothing contributes more to the *alleviation* of the *firſt*, and *precaution* of any ſubſequent *Feaver*, and *malignant putrefaction* of the Humors in the *Puſtules*. " *Quoties* " *cunque enim corpus ventilatur & nullo modo tranſpira-* " *tio prohibetur, facile putridæ fuligines per poros ex-* " *halantur, nec cordi communicantur, neque proin ſequi-* " *tur ulla febris: unica enim cauſa legitima & immedia-* " *ta febris eſt*, prohibita tranſpiratio; *uti etiam illis* " *qui a limine ſalutarunt Medicinam, notum eſt.* i. e. Whenſoever the *blood* is well ventilated, and *inſenſible tranſpiration* free, whatever *noxious* and *venenate* vapours are contained in the body, which might otherwiſe fly up to the *head*, and cauſe *incurable Phrenſies*, *deadly Sopors*, and *Epileptick fits*; or create *Lipothymies* in the *Heart*, or *difficulty of breathing* (which is a *mortal ſign* in this Diſeaſe) in the *Lungs*, or a *Diarrhœa* and *Dyſentery* in the *Inteſtines*, or a *virulency in the ſuppurating Puſtules*, and corrode even the *bones* and *ligaments*; theſe vapours exhale by the opened dores, and the *Feaver* abates: for any one that knows never ſo little in *Phyſick*, underſtands that the ſole legitimate and immediate cauſe of Feavers is prohibited tranſpiration: From what hath been ſaid it is evident, that *of all Remedies* Phlebotomy *is the moſt important in the Small Pox*, in the firſt beginning

Ioſeph de *Medicis* apud Gr. *Horſt.* t. 5. p. 50.

ning, whether the *Feaver* be a *ſimple Synochus*, or one that is *putrid* and *malignant*: and 'tis more a wonder that *any man ſhould oppoſe the due adminiſtration of it*, then that *all Europe in a manner ſhould agree to the practiſe thereof.*

Neither is it only to be adminiſtred to *allay the plenitude* (which generall occurs in *this Malady*) or to *prevent the evils forementioned*; but frequently for revulſion, when the *malignant* matter *begins* to affect the *Brain*, *Stomach*, *Lungs*, *Inteſtines*: For if during the *Feaver* the Humors ſeiſe upon thoſe parts with any violence, the Patient is in *apparent danger of death*, there being no way to prevent the *ſuppuration* there; and little hopes that the Patient will ſurvive *the diſtemper*, or (if he do) eſcape a *Conſumption* or *Dropſie* afterwards. " *Sunt aliæ ita malignæ, ut non* " *ſolum carnoſum genus adoriantur, ſed oſſa quoque dila-* " *nient, & corrumpant, & quandoque interna membra* " *principalia, ut hydropem generent, & nuper obſervavi-* " *mus puellulum quendam D. Donati Profili nepotem mor-* " *tuum ex hydrope ob variolas, & morbillos: quandoque* " *vidimus alios conſumptos ex aſthmate, ob eaſdem vario-* " *las: quandoque vidimus alios diarrhæa & dyſenteria* " *confectos ex morbillis & variolis, & alios gangrenatos* " *& eſthiomenatos.* It is true that *Phyſicians* do not alwayes regard the *diſtempers of the brain in this diſeaſe*, becauſe albeit they may be very *violent* in the beginning, yet they afterwards ceaſe of *themſelves*: nor do they appear ſo highly concerned for the *animal*, as *vital* functions: and in ſuch caſes *great judgment* is required in a *Practitioner* rightly to diſtinguiſh betwixt *what may affright others*, and *what ought to terrifie him*: But in caſe the firſt approach be accompanied with a *violent Cough*, *hoarſeneſs*, *difficulty of breathing*, the beginnings of *Squinancy* from a *puſtulary deſluxion into the Glandules of the Throat*, or with *ſwoonings*, and *perfrigerations of the hand, and feet*; He that thinks

Epiphan. Ferdinand. caſ. 1 medic. 78.

Si eſt bona vox, & bona reſpiratio, ſpes eſt in tuto. ex Avicenna. *Epiph. Ferdinand.* caſ. medic. 78.

Phlebotomy ought not to be adminiſtred (if other conditions permit) underſtands not himſelf, or complies too much with the *prejudicate* opinions of the *Patient* and *Relations*. The *Authority of all Phyſicians* almoſt juſtifies him: the *Rules of Art* direct him to it: the *proſperous ſucceſs* which frequently follows thereon imbolden him to it: and *Nature* her ſelf authenticates the *practiſe* by her *ſovereign example*: for it is uſual for *Patients* in the beginning of the *Small Pox* to bleed at the noſe: I have known *five* or *ſix* in one family (adult perſons) that bled of themſelves *eighteen* or *twenty ounces*, with greater benefit: whileſt *I durſt not be allowed to take away eight.* "*Novimus*
Epiphan. Ferdinand. caſ. med. c. 78. "*plures infantes in principio quibus ſanguis in copia exnaribus exivit, & bene habuerunt, neque tot tantiſque*
"*variolis & morbillis fuerunt afflicti unde multi autumarunt, ſi puero multa ſanguinis copia ſponte vel arte*
exieret, uſque ad animi deliquium, quod vel non variolabitur, vel non in tanta copia: nam variolæ & morbilli
"*vere ſunt morbi a ſanguine.* With this Author agrees the moſt experient *Augenius*, "*Saluberrimum*
Hor. Augenius de febr. l. x. c. 3. "*eſſe provocare ſanguinem exnaribus docuit experientia:*
"*nam quibus ſponte effluxit, variolæ pauciores & ſaluberiores evenerunt. Vidi hactenus pueros duos, qui ex*
"*fluore ſanguinis e nare dextra tertio die immunes a febre evaſerunt, & quarto die ſupervenerunt variolæ*
"*paucæ & benigniſſimæ.* I add the words of *Diomedes Amicus*, who having recommended the applying of *Leeches*, *Yarrow*, or *Horſe-tail* to the Noſe, thereby to cauſe a flux of blood, prooceeds: "*Hæc enim ſan-*
Diom. Amicus de variolis, c. x. "*guinis evacuatio a naribus, vel ſponte, vel arte facta*
"*adeo confert, maxime cum adſint ſigna fluxum ſanguinis portendentia, (cum tamen non fluat) ut ſolo fluxu*
Rhaſes 18. cont. 8. "*iſto ægrotantes iſtos ſanatos vidiſſe* Rhaſes *dicat*; & "*eum ſolum præſervare a nocumento oculos & alias fa-*
"*ciei partes dixerit* Avicenna: *quæ ſanguinis evacuatio*
"*ex naribus ſemper medicum excuſat ab omni alia evacuatione:*

cuatione: ſicuti facit etiam qui per uterum, vel hæmorrhoidas ſit, modo fiat cum alleviatione. The conſideration of this ſo beneficial an *effort* of Nature made *Augenius* and others to direct that after *Phlebotomy* in the Arm; the Patient ſhould be forced to bleed at the *right Noſtril* (in relation to the *Liver*) or at *both*: and in the cure of *Antonio Borgheſe*, a Nephew of Pope *Paulus* V. a Colledge of Phyſicians at *Rome* did preſcribe *Leeches* to be applyed to his *Noſtrils*, and his recovery was *principally* aſcribed thereunto.

Philander Collatium in dedic. *Marſil. Cagnati* ſuper aph. 22. ſect. 1.

I ſhall not undertake to preſcribe *how much blood may be taken away at once*: nor *how often Phlebotomy is to be repeated in the beginning of the diſeaſe*: I ſhould *expatiate* too much by ſuch a diſcourſe; the *general Rules* are to be found in *Augenius*, *Mercatus*, *Horſtius*, *Ranchinus*, *Epiphanius Ferdinandus*, &c. and the accommodation thereof to *particular caſes* doth depend wholly upon the *judgment* of the *Phyſician* employed; How *Children* (in whom the Diſeaſe, if they can be ordered) is leſs dangerous commonly: and how *Men* according to their *different habits of body*, and other circumſtances (it being more *perillous* in them, their *fleſh* being more *ſolid* and *tenacious*, their bodies leſs *perſpirable*, and their *blood* and *humors* more *acrimonious*) are to be ordered: When the *Lancet*, when *Leeches*, when *Cupping glaſſes* and *Scarifications* are to be made uſe of; the *wiſe* do know, and the *ignorant* may learn, if they will ſtudy to improve by *ſtudy* that time which they miſ-ſpend in *cenſuring the prudent actions of their betters.*

Before I proceed to the ſecond Queſtion, it will be convenient to decide that Controverſie about *Phlebotomy*, Whether it draw from the Circumference to the Center, and may hinder the eruption, or cauſe the Puſtules to return in, or

ſubſide? That there are ſome eminent *Phyſicians* who do hold, that *Phlebotomy doth draw the Humors from the Circumference to the Center*, I do grant: and in the caſe of the *Small Pox*, that it may chance to do ſo, is the *ſuſpicion* and *fear* of *Avicenna* and *Hollerius*, as well as Doctor *Whitaker*. But why the Doctor ſhould be ſcrupulous here, who hath ſo great a regard for the *Ancients*, (though he cite no *good Authors*) is to me a *Miracle*: For beſides the *Methodiſts*, who are more ancient than his *Citations*; the repute of *Galen* and *Aetius* (whom *Septalius* entitles to the Opinion) ought not to have been *ſupinely* contemned: and the *Authority of many of the Moderns* (which a man that cites *Fernelius* ought not to ſlight) doth prove unto us that *Phlebotomy* doth promote *tranſpiration*, eject the peccant humors to the Circumference, and not *revel* them back: and this is the Opinion of the learned *Septalius*, *Gregorius Horſtius*, *Joſeph de Medicis*, *Collado*, *Botallus*, and ſeveral others. I have ſaid enough to decide *this point* in the preceding diſcourſe about the *natue* and *effects* of *Phlebotomy*: Yet ſince it ſeems in this place peculiarly neceſſary to be again ſpoken unto, I thus argue thereunto. *If it be true that* Blood-letting *doth draw the humors from the Circumference to the Center; how is it that* Hippocrates, Galen *and all the Dogmatiſts do preſcribe* Phlebotomy *in Pleuriſies, and Inflammations of the Liver, and Lungs? Is this the effect of that* Revulſion, *that the Humors ſhould flow more inward? and from the ſurface to the center? Is it upon* this ſentiment *that Phyſicians reiterate their Phlebotomies? or practiſe them at all in the Itch, Leproſie, or Eryſipelas? Doth not* Hippocrates *caution us againſt the returning in of an Eryſipelas? Yet is there no man that can rationally condemn bleeding in* that Diſeaſe? *How often do we read the happy effects of this uſage in* peſtilential Diſeaſes *after the eruption of the* Spots (which *Septalius* tried upon himſelf; and

Lud. Septal. de peſt. l. 5: c. 17.
Greg. Horſtius Inſtit. Medic. diſp. 18. coron. de venæ ſect. qu. 7.
Joſeph de Medicis apud Gr. Horſt. t. 2. p. 52, 53.
Collado obſ. in Hollerii meth. c. 93.
Botallus de venæ ſect. c. 5. ſect. 6.
Hippocr. ſect. 6 aphor. 25.
Septal. de peſt. l. 5. c 17.

and *Minadous* upon an infinity of Patients) and of the *Parotudes* (of which *Riverius* boasteth) *of the Carbuncles and Botches* (the successfulness whereof converted the other Physicians to adhere unto *Septalius*, in opposition to the timorous *Francastorius*) *and even of the* Small Pox, *in which Avicenna alloweth* of it *before their eruption, and sometimes after it? Consider the Authors, and the Cases related concerning the prosperous issue of Phlebotomy in the* Small Pox, *and how speedily they have come forth thereupon; and see if it be possible to frame a ground for such sentiments, as Doctor* Whitaker *suggests: I will not here repeat the multitude of cases recorded by the* French, Italian *and* Spanish *Physicians; nor alledge the cases out of Forrestus: but content my self with the single instance of* Heurnius. " *Quin si dyspnæa adfuerit cum exanthematibus, interdum ad Phlebotomiam venimus.* " *Ita nobilissimæ comitissæ hymondanæ Franciscæ, Admiralii filiæ, venam pertundi jussi, cum exanthematu non satis prodirent, idque felici successu. Can we imagine that if the* proper effect *of Phlebotomy to* draw in the humours, *that it should so* frequently, *nay* universally, produce so different an operation? *Or, is it not more rational to think that the* proper effect *thereof is to* draw from the Center; *and that whensoever it happens otherwise, 'tis* by accident *only? Doth not* Collado *argue judiciously against the* generality *of that Assertion?* viz. All Phlebotomy draweth from the Circumference to the Center; *when he reasons thus?*

Io. Baptist. *Minadous* de abusu non mittendi sang. c. 14. *Riverius* prax. medic. l. 17. c. 1.

Heurnius in lib. 2. aphor. 15.

Collado obs. in *Holler.* method. c. 93.

Whatsoever doth draw back the humours from the Circumference towards the Center, is noxious in the Small Pox.

But some Phlebotomies are not hurtful in the Small Pox.

There-

Therefore ſome Phlebotomies do not retract the Humors from the Surface to the Center of the Body.

Which Concluſion is contradictory to the univerſality of the Propoſition aforeſaid.

I hope I need not inculcate to thoſe of the contrary tenet that old Rule in Logick :

Syllogizari non eſt ex particulari.

As for Doctor *Sydenham*, he grants that 'tis moſt falſe for any to ſay that *Phlebotomy* (and other evacuations) *hinders the eruption of the Small Pox, by introducing a contrary motion to what Nature intends* by the Circumference : *Since that 'tis commonly ſeen to happen quite otherwiſe*, they ſuddenly coming out thereupon : and therefore he ſuggeſts other Reaſons, but of little validity. Pag. 140. edit. 2.

Ibid. p. 141. ‘ *Per haſce evacuationes non tantum ebullitio nimis imminuitur, cujus interim ope partes deſpumandæ accurate ſecerni debuerunt: verum etiam illud ipſum ſubducitur, quod cæptæ ſecretioni quaſi pabulum continenter ſuppeditaret; unde ſæpenumero contingit, ut variolæ primum laudabili impetu erumpentes (eoque fortaſſe melius, quod evacuationes jam dictæ præceſſerant) paulo poſt ex improviſo quaſi repercuſſæ detumeſcunt, idque ob eam potiſſimum cauſam, quod materia deſit, quæ quaſi a tergo præeuntem inſequeretur, atque agmen clauderet.* These are his moſt *important* and *perſwaſive Reaſons*! ſo conformable to his Obſervations, that he makes *them* the *Baſis* in a manner of his practiſe! ſo powerful, that all that the *Phyſicians* have *obſerved*, *ſaid*, and *writ* for above ſeven hundred years is not worth a *ſtraw* in compariſon thereof! Such is the *Treatiſe* of his, *Quæ etiamſi neque mole ampla, neque ſpoliis Authorum* (quorum cineres per me molliter cubent) *ſit ſufferta, tamen non erit, uti ſpero, eo nomine tibi minus grata, quippe* Ep. dedic. ad cl. R. B.

qui

qui inter magna *quid interſit &* tumida *non ignoras!* I have wondered often that *his Books* ſhould meet with any applauds: and with what confidence he could obtrude upon the World ſo *irrational* and *abſurd* a piece; except it were to ſhew how *judicious in framing of Hypotheſis*, and *exact in their obſervations* theſe Baconical Philoſophers are. But, not to diſturb the repoſe of Fr. Bacon, or Bungey (*quorum cineres per me molliter cubent*) all that *he* proceeds *on* in *that Book* about *Feavers*, amounts to this, that *Nature affects a new ſtate and diſpoſition of the Blood; and ſo produceth a Feaver.* "*Febrilem ſanguinis commotionem ſæpe (ne dicam ſæpius) non alio colliceare, quam ut ipſe ſeſe in novum quendam ſtatum, & diatheſin immutet.* Well, *for diſcourſe ſake*, I will now allow him this: but I muſt remind him that *he* ſaith the *ſame* of the Small Pox: How then comes it to paſs that the *Indications* are not the *ſame*, where the *ſuppoſition* is the ſame, and the procedure of Nature the ſame, by *Ebullition* and *Deſpumation?* Before, he expreſſed himſelf thus; "*Ita mecum reputo, Indicationes veras, & geminas quæ in hoc morbo conſurgunt, in eo verſari, ut ſanguinis commotio intra modum naturæ propoſito congruentem ſiſtatur; ea nimium ratione, ut nec hinc plus æquo gliſcat, unde periculoſa ſympiomata inſequi ſolent, nec illinc nimium torpeat, quo pacto vel materæ morbificæ protruſio impediretur, vel ſanguinis novum ſtatum effectantis labefacturentur conatus.* We were *then* allowed to intermeddle, as we ſaw occaſion, and to aſſiſt Nature by *Vomits*, *Purges*, and *repeated Phlebotomies*, in caſe the *Ebullition* were ſo *violent*, as that it was *incongruous for the affecting that change in the maſs of blood*; or on the contrary ſo *defective, as not to be able to bring it about*: But *now*, when the *ſame things* fall under our debate; the *ſame Ebullition*, attended with no leſs *violence* and *danger* (rather much more) and the *like deſpumation* is to be effected, how come

I would not be underſtood to ſay the Doctor is a Conjurer.

De feb. continuis. p. 50.

pag. 65.

come the *Indications* to vary, and that our hands are tyed up from preſcribing *thoſe Remedies*, which a *parity of Reaſon* doth ligitimate? If it were not *neceſſary*, we were *then* obliged by our Obſervator not to *buſie our ſelves*: but amidſt the *aforeſaid circumſtances* we might interpoſe our aid: and *why not now*? No Reply can be made but this *extravigant* and *intolerable* Aſſertion; that, *In the Small Pox there never can happen any immoderate, or defective Ebullition naturally; but it muſt ariſe from the errour of the Phyſician, Patient, or Attendants.* And all the proof of *this* that I can find amounts to no more, than that *ſome*, or *many have been recovered by doing nothing in the Small Pox; when* Salubrious that oftentimes *upon Phlebotomy, and other evacuations practiſed in the beginning of the Small Pox*, though they have come forth well (nay the *better* for the uſe thereof) *yet in the progreſs of the diſeaſe, they have ſubſided, and returned in:* thoſe antecedent Remedies having either rendered the *Ebullition* too *minute* to finiſh the *deſpumation*, or having carried off part of that matter which ſhould have brought up the *rear*, whereby the *forlorn-hope*, or *vant-guard are diſappointed behind.* Moſt excellent! But may not I ſay on the other ſide, that ſince we oftentimes ſee that the *Small Pox* are preceded by a *malignant, peſtilential*, or *putrid Feaver* (no *defaults* in any perſon being to be alledged in the caſe) and that *many* (ſometimes *moſt*) do *not recover:* that in *thoſe difficulties* we are exempted from his *general Rule*, and cannot without *betraying our Patients* and our *own repute*, omit *thoſe Remedies*, and moderate the *Ebullition*, or *correct it?* Is it not ſo apparent that none, but *ſuch as prejudice hath rendered blind, and deaf*, can deny it, that *Nature frequently produceth an effuſion of blood at the Noſe*

(or

(or *menſtrous*) *in this diſeaſe, to the benefit, at leaſt not to the detriment of the infirm?* Is it not moſt notorious in *England*, that *oftentimes people are vomited, purged, and blooded, in the beginning*, they not ſuſpecting the malady, and yet none of theſe inconveniencies do enſue? Cannot the *avowed practiſe* of *Italy*, *France*, *Spain*, *Africk*, *Egypt*, *High* and *Low Germany*, and of many in *our Nation*, convince a man that *theſe ill conſequences do neither* generally *nor* neceſſarily *follow upon the* due adminiſtration of Phlebotomy? So that neither is the *Ebullition* rendered too *minute* (which may ſometimes be almoſt *inſenſible*) nor doth the *Van run away for want of a Rear-guard*. If it be ſo, as'tis *undeniable*, and our Book-cases make it good, I conceive the *Doctors* Reaſons to be *as weak as any were ever alledged*, and that whatſoever is the cauſe of thoſe *ſubſequent evils*, the *artificial uſe of Phlebotomy* cannot be the *proper cauſe* thereof: ſince nothing is more true, than that old Axiome, *Idem, quatenus idem, ſemper facit idem.* But here *thoſe effects* are frequently viſible, where *Phlebotomy* is not uſed; and do not enſue, as frequently, where it is *judiciouſly* uſed: therefore *thoſe effects* are not to be aſcribed *ſimply* to the bleeding of the Patient. 'Tis an *imbecillity of ratiocination* to erect *univerſal theorems* upon a Sæpenumero, or what oftentimes happeneth; eſpecially if that oftentimes be counterpoiſed by *almoſt as many*, or *more* Experiments of a *contrary event*. Beſides, who in *Phyſick* ever found out ſuch a Rule, as *Urgency*, or a *Cura coacta* did not abſolve the *Practitioner* from its obligation at *ſome times?* And that is the *preſent caſe*. We do

Nuper, cum 1665 variolis decumberent filii filiæque, uni præ cæteris ſanguine florido rubenti, libenter nonnihil ſanguinis ſubtraxiſſem prius quam eruptio fieret: ſed incerti eventus metu retractus optimum conſilium intermiſi, quod proficuum videbam: In mittendo enim ſanguine non tam annos Medicus numerat, quam vires ægrotantis æſtimat, *Celſo* præeunte. Negligentiam tamen meam vel metum ſupplevit Natura optato ſucceſſu & felici variolarum eruptione. Quippe quotquot ex meis decubuerunt, pleriſque delirantibus, eruptionem variolarum, hæmorrhagia narium præceſſit, qua ſublevata Natura promptius expulit variolas numero plures, ſed nulla alia malignitate infeſtas. *Bartholin.* medic. *Dan.* diſſert. 9. p. 428, 429.

Vide *Valles.* meth. med. l. 4. c. 2.

universally grant, and *Spain* it self will joyn with Doctor *Sydenham*, that *in the Small Pox, when either there is no Feaver, or a mild and salubrious one, and that Nature without any dangerous symptomes doth expeditely and congruously carry on the work*; we ought not, or need not to Phlebotomise: But we do say, *some exigencies may happen* (without any intervening errour) *in which that practise is legitimate, because then necessary*. I know not how diligent our *Observatour* was, when he took notice of such as *miscarried upon Phlebotomy*: were the *Physicians* befitting *Artists*? did the *Patient*, and all *Attendants* faithfully discharge *their duty*? was there no *Malignity* superiour oftentimes to *all Medicines*; no *individual circumstances*, such as commonly frustrate a *Cure* under the most *judicious Methods*? I must be informed of *this*, before I can determine, as *our Author* intends. Oh! what a misery is *much study*! and how many *scruples* is this Doctor *Sydenham* freed from, by suffering our best *Writers* to remain untouched, unconsulted!

But I need say no more: and therefore proceed to the second Question.

Sed maxime notandum est, exire aliquando variolas, aut morbillos, ita placide cum febre, vel sine febre, ut error sit venam secare. Commoda regio est, nullum accidens urget, neque expulsu, aut alio signo cognosci potest latitans malum. Quorsum sine ulla indicatione audet Medicus turbare crisin? *Auton. Ponce Santacruz.* de imped. magn. auxil. l. 3. c. 18.

The second Question is; Whether in the AUGMENT or increase of the Small Pox, it be lawful to let the Patient bleed? For the better understanding hereof, I think it requisite I explain what I mean by the Beginning, Augment, State, and Declination *of the* Small Pox. I intend by the Beginning all that *time* which intervenes from the first *illness*, *decumbiture*, or *Feaver*, until the *Small Pox* do begin to appear: this space is *uncertain*; for commonly it exceeds not *three, or four dayes*: though I have known it to be much longer before they have appeared.

appeared. And *Zacutus Luſitanus* ſhall confirm it to any one that doubts the truth of my Obſervations. " *Variolæ in die ſeptimo, octavo, undecimo, & duodeci-* " *mo; &, quod plus eſt, vigeſimo ſæpe apparere ſolent,* " *quando natura præ humorum onere preſſa cauſam mor-* " *bificum citius expellere non potuit.* *Diomedes Amicus* ſaith he had a Souldier at *Millaine* under cure, who having had *ſeven fits* of an exquiſite *Tertian*, in the end of the laſt *paroxyſme*, the *Small Pox* came forth, and he remained perfectly freed from any *Feaver*, till their *ſuppuration* occaſioned one, which ended in an happy recovery. 'Tis true the *Feaver* preceding the *Small Pox* may have its *diſtinct times* (which fall alſo under the conſideration of a *Phyſician*) and ſometimes the *Small Pox* are ſo *gentle*, that this *diſtinction* cannot take place: But 'tis not to my preſent purpoſe to entreat hereof: I have ſufficiently proved that *Phlebotomy* may be adminiſtred in the beginning: and the number of thoſe that deny *that*, is very inconſiderable: but in the Augment many are more timorous. By the Augment I mean all *the time from their firſt ſenſible appearance until they ſwell up, imbody, and exchange their red colour for one more white:* during which time commonly the Feaver ceaſeth, or giveth little of trouble to the Patient: and this extends uſually to the *ſeventh, ninth*, and ſometimes the *eleventh* day: ſometimes it happens that the *Pox* ariſe *one under another*, and then the Augment of the former becomes *coincident* with the ſtate of the latter.

Zacut. Luſitan. Medic. princip. hiſt. l.2.qu.2.

Diomedes Amicus de variolis, c. 6.

Horat. Augen. de febr.l.9. c.18.

It is not here to be debated, whether we may *let blood* in the *Augment* when it is *gentle*, and our *prognoſtics* happy: but in *difficult caſes*: as if the *Feaver* be ſo far from any *alleviation* upon their *appearance*, that it increaſeth, and the ſymptomes become more terrible: If the *difficulty of breathing* become *greater*, or continue *violent*: If the *throat become very ſore*, and

be accompanied with a *difficulty of ſwallowing*: If the firſt *deliriums* perſiſt, and there be danger of a *Frenzy*, or *Convulſions*: If the *Cough be vehement*: If *ſwoonings* or *vomitings begin*, or *continue*: If a *looſeneſs*, or *bloody flux*, or *bloody urine* enſue: If they *come out interruptedly*, and *diſappear after they have come forth*: If they *come forth of a dangerous colour*, or *be very hard and horny* (as they call it) or *interſperſed with purple ſpots*: If they *come out in ſuch multitudes, that Nature ſeems oppreſſed, and incapable of diſburthening her ſelf*, or *ruling them in order to due maturation*: If *apparent danger threaten the Eyes*: In theſe (and other caſes that are perilous) it is controverted, **Whether we may let blood?** And I am for the *Affirmative*; ſuppoſing that either *Phlebotomy* hath not been adminiſtred; or ſo *diminutely*, that there is ſtill occaſion for it. *Multa in præcipiti periculo recte fiunt, alias omittenda*: I have already alledged the Authority of *Avicenna* and *Rhaſes*, and *Bayrus*, and the practiſe of *Heurnius* upon the Counteſs of *Egmond*: I add here, that 'tis approved of by *Valleſius*, *Mercatus*, *Paſchalius*, *Fonſeca*, and the Phyſicians of *Spain*: by *Horatius Hugenius*, *Cæſar Claudinus*, *Epiphanus Ferdinandus*, *Dilectus Luſitanus*, and the vulgar practiſe of *Italy*: By *Joſeph de Medicis*, *Hoeferus*, *Bartholinus*, and many other Phyſicians in high and low *Germany*: and the happy practiſe thereof frequently in this Nation, hath given *ſome credit* thereunto. I mention not the *French* Phyſicians, becauſe their Authority is excepted againſt in *this diſeaſe*: though no Nation (excepting *Spain*) hath ever produced better *Practitioners*, or more *judicious* men than *they* are. It being manifeſt then that the number of *Phyſicians* which approve the *due adminiſtration of Phlebotomy* in the Augment of the Diſeaſe, and *after that they begin to appear*, is ſuch as may juſtifie any prudent Man in the doing thereof; Let us now examine with what ſucceſs it hath been done.

C. Celſ. Medic. l. 3. c. 18.
Valleſius in *Hippocr.* ſect. 2. aph 3.
Ludovic. Mercat. de morb. pueror. l. 2. c. 22.
M. I. *Paſchal.* meth. med. l. 2. c. x.
H. Augen. de febr. l x. c. 3.
I. C. Claudin. Empir. ſtationnal l. 5. ſect. 1. c. 1. p. 286.
Epiphan. Ferdinand. hiſt. 78.
Dilect. Luſitan. de venæ ſect. c. xi.
Art. 1. p. 145.
Joſeph de Medicis apud Greg. *Horſt.* t. 2
Hoeferus l. 7. p. 366.
Bartholin. ciſt. medic. p. 101.

The

The Counteſs of *Egmonds* caſe I have already recited: *Bartholinus* avows the beneficialneſs thereof.

" *Sunt tamen qui erumpentibus variolis venam ſecent,* " *quando febris intenditur, anxietas, ſpirandi difficul-* " *tas, angina, pleuritis, lotium craſſum, & rubrum, alia-* " *que ſymptomata apparent, ut detracta humorum portio-* " *ne, reliqua facilius ſuperentur. Certe ſi imperfecte* " *prodeant exanthemata, naturæ laboranti ſuccurrendum,* " *partim parca venæ apertione, ſi copia ſanguinis oneret,* " qnod multorum felix eventus comprobavit, *partim* " *ſudoriferis, quæ, ubi malignitatis ſuſpicio, tutius ad* " *extrema corporis clinimant ichores.* And *Dilectus Luſitanus* profeſſeth the neglect of it to be an errour:

Th. Bartholin. ciſt. med. pag. 601.

" *Qua in parte aliquorum Italorum Doctorum error &* " *timor calumniandus venit, qui dum apparere vident va-* " *riolus inviolabile ſervant præceptum nullo modo ſan-* " *guinem evacuare; & in præſenti caſu exceptio facien-* " *da erit, cum multa experientia viderimus in his quibus* " *talis evacuatio fuit repugnata, & ante ſuppurationem* " *pueros ſuffocari, & in multa illarum quantitate etiam* " *ſuppurata. Non enim poteſt natura tanta regere &* " *vincere ulcuſcula, & ideo ſuffocatur, indeque multoties* " *pulmonia & alia ſuperveniunt accidentia.* 'Tis needleſs to recite other caſes: I proceed to the Reaſons of the *practiſe*; which though they are eaſily deduced out of the foregoing Treatiſe, *concerning the general effects and utility of Phlebotomy*, yet may it not ſeem amiſs to debate the controverſie *particularly* in this place.

Dilect. Luſitan. de venæ ſectione cap xi Art. 1. p. 146.

It is an *Aphoriſme* of *Hippocrates*, that in the beginning of Diſeaſes a Phyſician is to adminiſter his principal Remedies: but in the ſtate to ſuperſede: *Cum morbi incipiunt, ſiquid videbitur movendum, move: cum vero vigent, quietem agere melius eſt.* And the reaſon of that *injunction* is, becauſe that in the *beginning* Nature is rather *oppreſſed* by the *turgent* and *crude humours*,

Hippocr. ſect. 2. aph. 29.

mours, then as yet *debilitated*; the temperament of the body is not much vitiated, nor the mass of blood much *depraved*; nor the Disease highly *prevalent*. It being most certain, *Circa initia & fines omnia sunt leviſſima: circa vigores autem vehementiſſima.* In which *Aphorisms* the word beginning is so used as to include the Augment of the Disease: for he passeth *immediately* from the Beginning to the State of Diseases. *Id nunc manifeste ex verbis Hippocratis constat, qui* principio *nominato ad* statum *transilivit, tanquam* Augmentum *sub* principio *continuerit. Clarius id cognosces, quia morbum in tria duntaxat tempora partitur.* And from hence we learn, that the most *seasonable* time for *Phlebotomy* is within the time of the *Beginning* of the Small Pox, yet so as it includes the Augment, and may *then* judiciously be practised, in case it have been *omitted* before, or that new emergencies *urge* us thereunto: for if we delay *then* to use it, 'twill be too *late* to administer it, when *Nature is more spent*, the *Blood and Humors more corrupted* and perhaps *degenerated into a malignity*; the *disease* with all its *symptomes* more *violent*. If then *after the eruption of the Pustules* the Feaver *continue*, or *increase*, with evil symptomes; 'tis most evident that we ought to proceed to *Phlebotomy*, not only to diminish the present *plenitude of blood*, and *surcharge of peccant humors*, to allay the vehemence of the present Feaver (by ventilating the blood) open obstructions, relax the texture of the body; but also to prevent *future evils*, which will *after* prove *remedileſs*. For in case the *Feaver* continually increase, 'tis indisputable that no *proper maturation* of the Pox can ensue: the *violence* thereof interturbing *that work*, and depraving the *expulsed humors* so as to destroy the *habit of the body*, instead of *suppurating* in the skin: and their eruption is in this case perfectly *symptomatical*, because they bring no *alleviation* with them, but add to the

Id. ibid. aphor. 30.

Hier. Thriver. in Hipp. l. 2. aphor. 29.

danger

danger ſo much as their *maturation* interferes with the proper cure of the *putrid* or *malignant* Feaver: If ever it be true that the *expulſion of the Small Pox* is a *Critical motion*, 'tis manifeſt that now they are to be looked on as *judicatoria non judicantia*, as efforts of Nature *intending*, but *not being able* to effect her eaſement; and conſequently they portend either a *tedious and perillous ſickneſs*, or *death*. *Omnes excretiones male ſunt, quæ non ſedant dolorem——& quæ non judicant, difficile judicium reddunt, atque quæ lædunt in acutis morbis exitium prænunciant.* And were there any danger of *retracting* the expulſed matter, as there is not (becauſe neither doth *Phlebotomy* draw from the *Circumference* to the *Center*: nor is it an eaſie thing to draw back *extravaſated matter*) yet would not the regard thereunto deterre us from this practiſe; becauſe in reference to the *maturation of the Puſtules*, the Feaver *here* aſſumes the nature of a *Cauſa prohibens*, or an *obſtacle* and *impediment* thereunto, which muſt firſt be removed. The caſe is hazardous; but 'tis now we muſt act with that *prudence* which obligeth us to attend unto what is moſt urgent; though we neglect not other conſiderations: Nor can any man *in his wits* doubt but that we ought to recurre unto *Phlebotomy* (even more than once) *Cupping-glaſſes*, and *Scarifications*, except by declining an uncertain peril we will ſubject the Patient to one that is certain. Other remedy there is none: and what imports it, if the attempt be hazardous, ſince the omiſſion is likely to be *more fatal*? we know not, nay ſcarce fear that we ſhall indammage the ſick by the *remedy*; we are aſſured to do it, if we *forbear*: ſeeing that each moment adds to his jeopardy, and ſo far incapacitates us to ſerve him, as it accelerates the *ſtate of the Diſeaſe*; in which when the diſtemper is moſt *violent*, we are *generally* obliged to ſuperſede: or if we were not, yet would our care ſpend it ſelf to no purpoſe; for in ſuch

Proſper Alpin. de præſag. vita & morte, l. 1. c. ult.

such *Small Pox* there is not any *declination*, nor doth the Patient ſurvive the *State* thereof. " " *Status autem* [variolarum lethalium] *cum omnia in deteriorem labuntur diſpoſitionem: exulcerantur ſubdita partes, pus educitur maxime fætidum, nigricans, viride; ſubjectum corpus plurimum contraxit ingredinis, ita ut totum videatur igne uſtulatum, virtus imbecilla, febris interdum magna: atque tunc ægrotus moritur.*

Hor. Augen. de febr. l. 9. c. 18.

Neither is this the only caſe in which a Phyſician ought to practiſe Phlebotomy; but it *may* be done ſafely and *warrantably*, if that the *Small Pox* do not come out kindly; but *appear, and then retire in again*, or come out ſo *ſlowly*, or *evil coloured*, as that the Patient *may* be in danger to periſh during the *progreſs* of the *malady*. For in the firſt caſe, is a certain ſign that *Nature is not able to govern thoſe humors in the firſt eruption*, either becauſe of their *malignity*, or *ſurcharge*: and if it be not to be done by *her*, when the Diſeaſe is not arrived to its *height*, nor ſhe as yet much debilitated: how can we imagine, but ſhe muſt fail in the *vigour of it?* It is therefore requiſite that a Phyſician (duly conſidering all circumſtances) do proceed to ſecure the infirm by a *minute*, and perhaps *iterated blood-letting*. For it is not *here* as in other *putrid* or *malignant Feavers*, in which we have a greater latitude of practiſe; and what Nature cannot effect by one way of *termination*, may be accompliſhed by *another*. The *concomitant Pox* alter the courſe of the *Feaver*, and ſuffer it to admit of no other iſſue, but by a *due maturation of the Puſtules*: ſince therefore that *Phlebotomy* promotes the *eruption*, and by altering the *texture* of the whole body and facilitating *tranſpiration* doth diminiſh the *morbifick matter*, hinder *putrefaction*, extinguiſh the *Feaver*, and ſo alleviate Nature, that ſhe is enabled to proſecute happily her work; I ſee no reaſon, but that it *ought to be adminiſtred:* and the ſame conſiderations do ſway

me

me to approve of *it* in the *latter* caſe : for if the *Pox* appear malignant in their *firſt coming forth*, their *continuance* will prove *fatal*, if this Remedy be not applyed : for we have none ſo *effectual*. No *Minoratives* can be uſed to diſburthen part of the humour ; no *powerful Cordials* : for thoſe, however they ſeem to yield a *preſent benefit*, do in the iſſue *debilitate Nature, diſſipate the ſpirits, retard the maturation*, and oftentimes increaſe the Feaver, and occaſion a *Phrenitis*, or other deadly *ſymptomes*. *Veſicatories* are attended with no leſs jeopardy, not only for that *they* frequently cauſe *bloody Urines*, and *exulcerate the Bladder*, and procure a vexatious *tenaſmus*, (which I have ſeen to fall out, when they were applyed in *other diſtempers*) but becauſe the *ill-conditioned* matter being attracted to them, may cauſe a *Gangrene*, or otherwiſe endanger the Patient : upon which account, I do not remember any that ever propoſed *them* in this Diſeaſe. 'Tis true, I knew a *Perſon of Honour*, who in *France* was *four times blooded* pretty largely before their eruption, and then had *Pigeons* applyed to his *face* and other places (becauſe they came not forth well) and ſo was recovered : 'Tis true that *Proſper Alpinus* doth commend *Inunctions with Nitre and Oyl of bitter Almonds* to be uſed once or twice in a day : but beſides what *Melichius* records, the practiſe being novel in *England*, and ſeldome uſed in *Europe*, I believe no diſcreet man will adventure *his credit*, or the *life of the ſick* thereupon ; but rather acquieſce in the *received, warrantable, happy* practiſe of the generality of Phyſicians.

Proſper Alpin. de med. meth. l. 5. c. 9. p. 173. de medic. Ægypt. l. 4. c. 15. *Melichius* Armament. medic. diſt. 9 in Scholio ſuper *Pilulis de nitro.*

In caſe that there be a great redundancy of the *maſs of blood* in the aforeſaid caſes, ſo that Nature ſeems *oppreſſed*, and to be ſo *ſtreightned*, as not to be able to free her ſelf from the corrupted humours, who can doubt but the *Phyſician* hath more reaſon than

otherwiſe to *phleſotomiſe* the ſick in *this time* of the Diſeaſe? It is a *Rule* in *Phyſick*, That *we ought to attend principally in diſeaſes to that which is moſt urgent; yet ſo as not to neglect thoſe other conſiderations which ariſe from the nature of the Diſeaſe.* In this laſt caſe the regard unto *plenitude* is moſt urgent. For if there be ſo great a *Plethora*, as that there is danger leaſt the Patient be ſuffocated, and the natural heat extinguiſhed, which is the ſuppoſition of *Avicenna*, when he ſayes, *Timetur ſuper eum corruptio extremitatis.* And if *Phlebotomy* either hath been omitted, or not adminiſtred as 'twas requiſite, who can imagine that Nature will be able to govern and regulate ſo great a *ſurcharge* to the benefit and recovery of the Patient, but that when the humours ſeparate and *extravaſate*, ſome part will mortifie and *ſphacelate*, or the party be *ſuffocated?* It is really to be ſuppoſed that the ſick perſon will dye within a ſhort time, except Nature alleviate it ſelf by a large efflux of blood at the Noſe. It is *here* as it is in a *Synochus putrida*, (for commonly 'tis a *Synochus putrida* which accompanies the *Small Pox*) in which if either by reaſon of the reluctancy of the Patient, or ignorance of the Phyſician, *blood-letting* be omitted, the caſe becomes exceeding perillous, except Nature be very ſtrong, or a great flux of blood, or plentiful ſweat ſucceed: as *Galen* relates in the *ninth Book, and fourth Chapter.* 'Tis meer folly here to object, that albeit that *Phlebotomy* be omitted, yet ought we to *preſume well of the Patient*, becauſe the *Small Pox* do come forth: as when *ſweat* appears in a *Synochus*: for there is a great diſparity in the caſes: The *ſweat* is diſcharged out of the ſkin: the *Small Pox* are lodged in the ſurface of the body, and muſt there be *maturated*; beſides that the *Small Pox* infeſt alſo all the *inward parts*; ſo that the danger is greater *here*, than upon the eruption of *ſweat*: Moreover the *ſweat* conſiſts of a more *ſubtle* and *Ichorous* ſubſtance, and

and finds a more facile and certain exiture; but the *Small Pox* are of a *groſſer ſubſtance*, and come not forth with *equal facility*. It is alſo to be conſidered, that as a large evacuation by *ſweat* may happily terminate a *Synochus*; ſo, although the Patient do abound with blood, Nature may ſometimes ſo expel and regulate the matter, that the party may avoid the imminent perils: but he that truſts thereunto muſt well ponder not only how *plentifully* the Pox come forth, but whether it be *proportionate* to the exigencies of Nature (for whatever is not *ſuch*, is *minute*) and what *alleviation* inſues: not to mention other things. And as when *ſweat* doth not appear in *due time*, *due quantity*, with *due qualifications*, the Patient doth nevertheleſs *dye*: So we daily obſerve it to fall out *in the coming forth of the Small Pox*. And therefore I do aſſent unto the directions of *Avicenna*, and *Augenius*, that in caſe of *this urgency*, Phlebotomy be judiciouſly made uſe of: and whatſoever danger may *ſeem* to be in it, 'tis prudence to ſubmit thereunto rather than to incurre *greater*.

Hitherto I have treated of *Phlebotomy* as 'tis an *evacuative* and *relaxing Remedy*; but there is oftentimes occaſion for it by way of *Revulſion*, when not only the *Eyes* are in great hazard to be ſpoiled, or the blood ſtagnates about the *Heart*, *Lungs*, and *Thorax*: or that the *Small Pox* very much affect the *Stomach*, and *Entrails*, or occaſion a *Diarrhœa*, or *Dyſentery*: For in theſe caſes, 'tis moſt probable that the Patient either will not live to the *ſtate of the diſeaſe*, or dye *then*. 'Tis a received tradition from *Avicenna* downwards, that in caſe the Patient in the *Small Pox* do *breath freely*, and ſuffer no defect in his *voice*, there is little, or no danger; unleſs ſome accident introduce a *Dyſentery*: Becauſe that is a ſign that the *Throat* and parts relating unto *reſpiration* are ſecure. But in caſe it appear

Diomedes Amicus de variolis, c. 8.

that the inward parts are infeſted by the *Pox*, and that *ſwoonings*, *vomitings*, *difficulty of breathing*, a *ſoar throat*, and *great hoarſneſs* trouble the Patient, 'tis moſt manifeſt that he ought to be blooded for revulſion; leaſt in the *state* of the Diſeaſe, the Puſtules coming to maturation, may by their *purulent ſtench* annoy, or by their *growth* and *inflammation* ſuffocate Nature, or exulcerate and apoſtemate the Lungs. It is uſually ſeen that people dye of the *Small Pox* in the *State* of the Diſeaſe (on the *ſixteenth*, *ſeventeenth*, nay *twentieth day*) though they have ſeemed *plentifully* and *kindly* to come out: and the reaſon is (I abſtract from *all errors*) becauſe a due regard hath not been had to thoſe that infeſted the *inward parts*: for they have exulcerated the *Inteſtines* and created Fluxes, they have occaſioned in their *maturation* a new and perillous *Feaver*, a *Squinancy*, a *Pleuriſie*, and particularly by affecting the membranes of the *Stomach*, they have created *Vomitings* and *Lipothymies*, &c. And this will ſeem credible to any that by conſidering what happens in the ſurface of the body, apprehend what muſt enſue upon their maturation within: and thoſe *Ignorants* who have admired at *theſe events* in the *ſtate*, and *declination*, will ceaſe to *wonder*, when they aſſume theſe thoughts of *Phyſicians*, and weigh attentively the Augment, State and Declination *of the Puſtules*.

To conclude this diſcourſe; who hath not ſeen in the *Augment* of the *Small Pox* large eruptions of blood at the *Noſe*, as alſo *menſtruous* Fluxes ordinately and inordinately to intervene, *without any peril*; ſometimes to the great benefit of the ſick? About fourteen years ago I accompanied an eminent Phyſician to a Patient of his, in whom the *Small Pox* were come out *well-coloured*, and *plentifully*, yet did the *Feaver* continue, together with a delirioufneſs, want of ſleep, and *reſt-*

reſtleſsneſs: to all which a great *Hemorrhagy* at the Noſe (of above fourteen ounces) did put a period: and of the *latter caſe*, I had (amongſt many others) an *happy Inſtance* lately at *Warwick*.

Inſtances of the happy ſucceſs of *Phlebotomy* in the Augment of the Small Pox, after they were come forth.

℔. 7. The illuſtrious Lord of *Poyrin*, a ſtrong young man, was ſeiſed with a violent putrid Feaver; on the third day he was taken with a *looſeneſs*, which reſembled what Phyſicians call a *Diarrhæa*: on the day following the *Feaver* and *Flux* continued with the ſame violence, and a multitude of *red ſpots* appeared all over his body, with a little protuberancy: on the fifth day, all ſymptomes perſiſted in the ſame violence, or rather encreaſed, whereupon I being preſent cauſed him to bleed *eighteen ounces*; after which operation all thoſe perillous ſymptomes did ſo abate, that within two dayes there was not any thereof remained. *Botallus* de venæ ſectione, c. 5.

℔. 8. On the ſame day that the aforeſaid Lord was *let blood*, and in the ſame houſe, there was a Servant of Mr. *Barruſſa*, who was ſick of the ſame diſtemper; but he had no *Flux*: he had been ſick *four dayes*, and *two dayes* were paſſed ſince the *Small Pox* appeared: He was of the Age of eighteen years. I took from him a *pound of blood*; whereupon all his diſtemper left him, and he went about his buſineſs, attending on his Maſter, on the day following, which was the *fifth day* of his ſickneſs.

℔. 9. Such *Phlebotomy* did alſo recover Mr. *Clermont* from a *Feaver*, and the *Small Pox*: as alſo—— *Villard*, one of the Queens Pages; and another Page of

of the Duke of *Alencon*'s, and many others were cured by me in that manner. Alſo that learned Phyſician *Pietreus* told me, that he practiſed this courſe with good ſucceſs upon his own Son.

I come now to the third Queſtion: Whether in the State of the Small Pox Phlebotomy may be adminiſtred? I call that the *ſtate* of the Small Pox, when they are come to their *full bigneſs*, and become *white*, and *repleniſhed with ſuppurated matter*: or, in caſe they are *malignant* or deadly Pox, I call that the State, when the *Puſtules* (being *green, blewiſh*, or *black*) are exulcerated, the ſubject parts corroded, and a *ſtinking, black* or *greeniſh* purulency iſſues. And here I avow that a *Phyſician* may ſometimes according to the *Rules of Art*, and with great judgment adminiſter *Phlebotomy*. 'Tis moſt true, that I cannot (to my knowledge) defend *this practiſe* by the Authority of any one *Writer* in Phyſick, except it be *J. Frommannus*, who finds ſome caſes in which he juſtifieth it in the *State* of the Meaſils. 'Tis alſo true, that the *common Precept* amongſt us is, not to diſturbe Nature in the *State*, when ſhe is buſied moſt about *Concoction*; but rather to ſuperſede from the *great Remedies*. But I have learned from *our Maſters*, that there is ſcarce any *Rule* in our Art, the Obligation whereof is not ſuſpended by urgency, and that they conclude us in the *ordinary*, not *enforced* procedures: "*Neceſſity is abſolved from all Laws; and Wiſdome it ſelf preſcribes that we ſhould not alwayes take its counſels: 'tis certain ſhe meddles not with the regulation of extremities, nor with the conduct of Deſpair: She in ſome encounters diſpenſeth us from thoſe things, which in others ſhe ordered us. Without offending her, we may creſs the fields when there is danger on the right and left, and try whether an exceſs will not cure us, when other remedies have ill operated; and caſt our ſelves into*

I. C. Frommannus de venæ ſect. in declin. morbill. ſect. 104. *Hippocr.* Aph. 29. ſect. 2.

into the armes of an enemy, when she is no longer able to defend us. I am told by *Vallesius*, that although *Diocles*, and *Celsus*, and some others have prohibited *Phlebotomy* after the *fourth day:* and though *Avicenna* profess that *venæ-section* being once *pretermitted* ought not to be *resumed:* yet both these tenets are *erroneous*: for though *Phlebotomy* be most convenient in the *beginning* of the Disease, yet ought it not to be excluded in the *other times*, when occasion requires it. There are few Diseases whose beginning extends not it self beyond the *fourth day:* and even in the *declination* oftentimes we may beneficially *let blood*, for the *attemperation of the inward parts, to ventilate the body, and allay its inward fervour:* How much more then in the *Augment*; and *State?* Besides, *Galen* himself laughs at those who confine the use of *Phlebotomy* within a certain number of dayes. "*Quocunque* "*etenim die mittendi sanguinis scopos in ægrotante in-*"*veneris, in eo præsidium hoc adhibeto, etiamsi vigesimus* "*ab initio morbi dies fuerit. Quinam vero fuerunt hi* "*scopi. Magnus morbus, virium robur, excepta ætate* "*puerili, & ambiente nos aere admodum calido.* In another place he sayes. *There is not any time of a disease in which you may not bleed; but the sooner it is done, the better.* Another sayes, *Ubi magnitudo morbi postulet, & vires permittunt, non solum octavo die, ut Hippocrates Anaxioni, sed & decimo, ac vigesimo, felici successu* "*venam secamus.* This point is excellently prosecuted and illustrated by *Lotallus*, to whom I referre our Experimentators for to be satisfied. And I must avow that in *other diseases* I have never scrupled at *this caution*, as others, but practised it *with success* in the *State*, and sometimes *Declination.* And *why we may not do it in this Disease?* is the present Question. It is certain that in the *Small Pox* at this *time*, there happeneth sometimes a *Strangulatory* distemper

Valles. meth: med. l:4. c. 2.

Galen. de sang. missione, c. 20.

Galen. meth: l. 9. c. 5.

Hier. Rubeus in *C. Cels* l 2. c 10. p. 94.

Botallus de venæ sect. c. 22. Concerning *bleeding* in the *Augment*, *State* and *Declination* of a *putrid Feaver*, see *Caspar Bravo* Resolut: Medic. p. 4. disp 1. sect. 7. resolut. 8, 9, 10.

distemper or *Squinancy*, sometimes a *Pleurisie*; sometimes a *Diarrhæa* or *Dysentery*: sometimes an immoderate Flux of the *Menstrua*: In all these cases 'twere great *indiscretion*, if not *ignorance*, to omit *Phlebotomy*: If any of them can be disputed, 'tis that of a *Diarrhæa* and *Dysentery*: and yet that is so vindicated by *Botallus*, and *Prosper Alpinus*, (not to mention others) and attested unto by a successful *Experience*, that 'tis no longer a Controversie. I have already shewed that *Phlebotomy* doth not draw back the *expelled* matter: but promoteth *transpiration*, which is impeded by the maturation of the *Pox*, during the State: it *ventilateth* the blood, hindereth further *putrefaction*, and diminisheth that *plenitude*, which, whatever it be, is too much for *debilitated Nature* to govern: it revelleth the *impacted* humours, or such as are *flowing* to any *determinate* part: so that not only in the *aforesaid cases*; but if a new Feaver arise *then*, or any danger threaten the Patient in the *declination* (both which cases often occurre) I do not see why it *may not* (or *ought not*) to be done, whatever the peril be that *may* happen thereupon. Few there are but have so much *strength*, as to bear a *small evacuation by blood-letting*: and he is unacquainted with his *profession*, who hath not seen *prodigious effects* arise from a *minute Phlebotomy*. Our Writers do sufficiently explain the *signs* by which *we* are to be assured, *Whether the Patient can bear Phlebotomy*; and in *what quantity*: which *conjectures* if they be not *duly* pondered, 'tis the default of the *Physician*, not of the *practise*, when any *sinister event* doth ensue. And therefore I can only recommend to the World *this caution*, that they make use not of such Practitioners as *talk most*, and pretend to *new Reasons*, *Methods*, and *Medicaments*; but of those who best understand the *old Diagnestics*, *Prognostics*, *Methods* and *Medicaments*, in order to a cure: and have from more than *one* or *two*

Botallus c. 5. *Prosper Alpinus* de med. Ægypt, l. 2. c. 7.

Books

Books informed themſelves of the *hiſtory of Phyſick*, as it relates to *particular caſes*, and by a diligent attendance on their practiſe obſerved the truth of *what they have read*, and learned to accommodate their *Rules* to each *individual*. Could a man ocularly demonſtrate all the *curioſities* of *Malpighius* by the beſt *Microſcopes*, or manifeſt the *Ductus rorifer* of *De Bils* unto any Spectator: nay, what if he could make the *volatile Salt of Tartar*, or the *Helmontian tincture of Amber*, or even the *Philoſopher's ſtone*, what is this to practiſe? How much leſs are *they qualified*, who can alledge nothing for *themſelves* then that they are *enrolled* in the *Society of the Roſicrucians*; that ſo many men *extol them*, who are *obliged* to magnifie (*juſtly* or *undeſervedly*) all of *their number*; and that they are *good Wits*, *ingenious Drolls*, Maſters of ſome *Mathematical* and *Mechanical knowledge*? As to the point of *Concoction*, that tis not to be hindered; In the *Small Pox*, if they be *ſalubrious*, this conſideration is overſwayed by preſent *Urgency*; and if it were not, yet would that repugne only to a profuſe evacuation; and *contra-indicate* no more, then doth the regard unto the *ſtrength of the Patient:* a *minute* and *partite Phlebotomy* doth not impede any *concoction*; as our *book caſes*, and *daily practiſe* ſheweth: And in caſe the *Small Pox* be *perillous* or *deadly*, 'tis moſt certain that there is either *no concoction* at all, or ſo *imperfect* a one, that it doth not at all oblige the *Phyſician* to ſuperſede, but rather to proceed *hereunto*, except he be timorous and unwilling to *diſparage ſo generous a Remedy*, or the *Patient* and *Attendants* be averſe *from it*. Neither of which *regards* are ſo authentick as to derogate from the attempts of thoſe who *will not abandon their Patients to the uncertain prognoſtics of acute diſeaſes:* however *they* may in *ſome ſort* excuſe thoſe that take a contrary courſe.

The last Question is, Whether in the declination of the Disease a Physician may practise Phlebotomy? I call that the *Declination of the Small Pox*, when the matter in the *pustules* is condensed into Scabs, and they dry up, and the *Epidemis* with them doth pill off, leaving *impressions* or *marks* in the Skin. This *Question* doth not relate unto the *mortal Pox*, for they have no declination: but to such as are *salubrious*, and though they may have been accompanied with *dangerous symptomes*, yet are now in an *hopeful way of recovery*. Or if we must allow a Declination in the *pernicious malignant* Small Pox, it can be only one that is *uncertain* and *fallacious*; for when any Patient feels an *unexpected* alleviation, and such is grounded upon *no reason*, there is no trust to be placed therein. " *Iis quæ non secundum rationem sublevant,* " *non oportet fidere: neque terreri multum, ob mala quæ* " *præter rationem fiunt: pleraque enim horum sunt in-* " *firma, neque diu manere atque durare consueverunt:* In this *time*, I say, there may happen such cases as require *Phlebotomy*, and in which it ought to be practised. 'Tis observed that a *Flux* in the *declination* of the *Small Pox* is generally mortal, although it be not accompanied with a *Dysentery* or exulceration of the *Gutts*. It is no *critical* evacuation, because *such* happen not at *that time:* and because it befalleth the Patient in the most *unseasonable time* of the Disease, when Nature is most *debilitated* with the precedent Disease, and ought rather to testifie signs of *strength*, then of *further imbecillity:* it enforceth us to employ all those cares which a *symptomatical evacuation* doth call for: and in this case, since *purging* is dangerous, and *astringents* full of hazard, there seems no way so *safe* as *Phlebotomy* duly administred. It may also happen that the Patient fall into a *Pleurisie:* Thus in the case of *Frommannus*, in the *declination* of the *Measils*, the Gentlewoman fell into a *Pleurisie*, which he indeavered to cure by

Hor. Augen. de febr. l. 9. c. 8. *Caspar Brave* resolut. med. part. 2. disp. 3. resol. vii.

Hippocr. aph. 27. sect. 2.

Hor. Augen. de febr. l. x c. 8.

by *Phlebotomy*, and was defended in the *practise* by the best *Physicians* in *Germany*.

The Reasons which have been urged already in the other *times* will many of them justifie the Practitioner *in this*: and nothing is more certain in Physick, than that the use of *Phlebotomy* is not indicated by the *time of the Disease*, or *contraindicated* by any number of dayes, but by *other motives*: and that whensoever it is necessary upon any urgency, nothing but *want of strength* doth repugne thereunto.

It may perhaps be demanded, Whether upon the *declination* of the *Small Pox*, if there be any danger of an *Asthma* or *Consumption* to be contracted, it be safe to *let blood*, or in order to better *convalescency*?

I profess it may *safely* and *prudently* be done for *Revulsion*, before the humours be more radicated and setled there, and the Disease become *incurable*: for this is an infallible sign that the Disease is not *well terminated*: and then those *Rules* which oblige us not to intermeddle with any *perfect Crisis*, or indication, are *infirm*, conclude us not. Oftentimes we see *Rheumatisms*, and *Botches* to ensue, and *they* shew that all the *morbifick matter* is not ejected: Besides, in order to a *better convalescence*, if *Phlebotomy* have been omitted in the *beginning*, and that the *recovery* is likely to be *slow*, I think (and 'tis said to be the judgment of *Avicenna*) that it may be done: and I have seen it practised with a much more *happy success* than ever I saw *Purge* given in *that time*: But in this last case I referre it to every mans judgment to act as he please; and request only that they would not condemn others of a different *practise* from what they follow.

After all this discourse of *bleeding in the Small Pox*, I must conclude with this intimation, that in *sundry cases*, and *some habits of body*, 'tis possible that *Phlebotomy*

tomy may be ſupplied by *Cupping-glaſſes* and *Scarification*: and I profeſs, that were the *Scarification* of the *Ægyptians* (mentioned by *Proſper Alpinus*, and frequently uſed amongſt the *Ancients*) admitted into *our practiſe*, I ſhould frequently prefer *them* before any *Phlebotomy*: Being in *Jamaica* I obſerved that the *Spaniſh* Negroes *there* did much uſe them: and during my ſickneſs of the *Colick* bilious, I had the curioſity to have them tryed upon me in the beginning. I obſerved that they were as indolent as *Proſper Alpinus* and *Mannus* do relate them to be: but *no blood almoſt enſued thereupon*: whence *they* preſaged to me a *long* and *violent* ſickneſs; ſaying, that all the *water* of my *blood* was tranſlated out of the *veins* into my *bowels*: yet I have ſeen them to extract one from another a *pound*, or more, as they pleaſed.

Proſper Alpinus de medic Ægypt. l. 3.

But I find my ſelf wearied with the proſecution of this Letter; and the *ſicklineſs of the ſeaſon* permits me not leiſure to carry on the debate unto the Survey: But whoſoever examines attentively *that diſeaſe*, will be eaſily ſatisfied that it *may* be *beneficial*, and oftentimes *abſolutely neceſſary* to the cure thereof. In thoſe Countries where it is moſt *frequent*, and where the *Climate* bears a great correſpondence with ours, this is the practiſe: as you may ſee in *Forreſtus*: I add the Authority of *Clandinus*: *Joel*, (who preſcribes the repeating of *Phlebotomy* at leaſt *three times*) *Rembertus Dodonæus*: *Severinus Eugalenus*: *Balthaſar Brunerus*: *Henricus Brucæus*: *Baldaſſar Timæus*, (who alſo reiterates bleeding ſeveral times) *Platerus*: *Sennertus*: *Baldwinus Ronſſeus*: *Jo. Wierus*: *Salomon Albertus*: *Matth. Martinus*: *Gregor Horſtius*: *Valentinus Andreas Mollenbroccius*:

Forreſtus l. 20. obſ. xi. xii, *Claudinus* Emperic. ration. l. 3. ſect. 3. tract. 4. c. 5. *Joel* pract. l. 2. ſect. 5 §. 4. *R. Dodonæus* obſ. med c 33. *Eugalen.* de ſcorbuto, p 150. 151.
B. Brunerus (ſub finem Eugaleni) & *H. Brucæus* ibid. *Baldaſſar Timæus* caſ. medic. l. 3. caſ. 39.
Platerus prax. t. 3. p 431. *Sennertus* de ſcorbuto, c. 7. *B. Ronſſeus* de ſcorb. c. 8. *Wierus* in curat. ſcorbuti. *S. Albert.* de ſcorb. § 240, &c. *M. Martinus*, ſect. 145, &c. *Gregor. Horſtius* de ſcorbuto exercit. 2. ſect. xi. *Mollenbroccius* de varis c. 8. & 13.

lenbroccius: and the *Colledge of Physicians* at *Coppenhagen* (in their advice for the *Scurvey*, published by *Bartholinus*) I might add others to this *Catalogue*, but that 'twere needless. 'Tis true, that in the *Scurvey* many do not bear well large Phlebotomy; but that is not the Question: 'tis enough that they *minute vetiæ-section*, and that *reiterated*, doth agree well with *them*, and is oftentimes so necessary to the *cure*, that the omission thereof doth frustrate the most *efficacious Medicaments*. The Disease generally ariseth from an *obstipation of the Pores*, and such an alteration in the *texture of the body* as the *Methodists* would bring under Adstriction: and therefore *it* seldome occurreth in *hot Countries*, except the *wind* suddenly change into a *cold quarter*: and a multitude of Cures are recorded wherein *Phlebotomy* hath been the leading Remedy. The sick do frequently *bleed at the Nose*, and *Emrods*, &c. and since in distempers of the *Spleen* I find *Phlebotomy* commended, 'tis not to be denied in *this case*, without some special *contra-indicant*, which I am not yet acquainted with. *Bartholin. cist. medic. p. 506.*

I think I have in the *precedent discourse* enervated all that *M. N.* hath *maliciously* and *ignorantly* suggested against *Phlebotomy*: neither do I know one passage in *him* that can raise any *scruple* in the breast of a *judicious person*: but I must particularly caution him not to give too much credit to the *dotages* of Thonerus, a man of *little note* in his *own Countrey*; nor to go about to *delude* the World with Fables, as if the *Northern Climates* did not suit well with *Phlebotomy*: whereas it is notorious that no Nations do bleed more largely, nor more frequently than *they*: I will not insist on what they do in their *natural* or *artificial Bathes*, with *Cupping-glasses* and *Scarifications*, whereby they extract *many ounces* frequently every year; they applying *ten*, or *fifteen Cupping-glasses*, with *scarifications*; which sometimes they repeat *twice* in one hour. *Th. Jordan. de lue Morav. p. 13.*

As

As to *Phlebotomy*, in *Denmark* nothing is more common than whensoever the *Almanack* recommends bleeding, for every man almost to step into the *Barbers-shop*, and having *bled*, to go about his business: which custom though *Bartholinus* condemn, yet doth it evince the general use thereof *in time of health*: and who can doubt but that *they who bear it so well*, whilest free from any Disease but a tincture of the Scurvey: *might endure it in sickness?* did not a *puerile fear* in the Patient, or ignorance in the *Physician*, hinder them.

Th. Bartholin. medic. Dan. dissert. 9. p. 431, 432.

" *Adultiores alii in venarum apertione nimis sunt pro-*
" *fusi vel audaces, quippe visa fascia rubente ante ædes*
" *Chirurgorum appensa, ex Calendariorum signis depen-*
" *dentium, statim sine alia corporum præparatione in*
" *sella officinæ considentes brachium sine delectu pertun-*
" *dendum offerunt; & peracta operatione vel itineri se*
" *committant, aliisque negotiis conficiendis, vel vini mo-*
" *dium ebibunt: cumulati errores acri censura digni sunt:*
" *sed verba perdere nolo, quia Æthiopem me lavare scio.*
" *Monendum tamen duxi,* scorbutica nostra corpora
" *maxima indigere præparatione antequam generoso isti*
" *remedio subjiciantur.* If *letting of blood* were so *pernicious* in the Scurvey, 'twere impossible in so *general a practise* but the inconvenience would be discovered: and the people reclaimed from that inveterate vulgar custom of *Switzerland*; is, he that blameth *it*, doth thus describe. " *Solent nostrates, Ruricolæ in-*

Wepferus de apoplexia hist. 3. p. 12.

" *primis, ter quaterve in anno venæsectiones usurpare, &*
" *quolibet vice duas, quandoque tres, non raro quatuor ve-*
" *nas pertundendas curant; emittunt sæpe binas sangui-*
" *nis libras:* Nulla cura est vel temperamenti, vel
" sexus, vel ætatis: *Videntur quandoque gravidæ, quæ*
" *bis terve gestationis tempore sanguinem vena secta ef-*
" *fundunt, nec etiam partui vicinæ a venæsectione sibi*
" *temperant, persuasæ salubrius puerperium agi. Vidi*
" *senes octuagenarios hoc remedii genus expertos: nec san-*
" *guine fuso admodum solliciti sunt, qua ratione inanitæ*
" *venæ*

venæ preſtantiore ſanguine replendæ ſint, frequenter enim ſtatim ac ſecta vena eſt, & cibo & potu nimio corpus inferciunt. I have not read of the like *practiſes* in *France*, *Spain*, or *Italy*: Nay, 'tis in *Germany*, that for *healths ſake* very old men bleed largely twice *each year*: inſtance whereof are given by *Faber* in his Notes upon the *Mexican* Herbal. "*Reverenda canitie, & ſeptuaginta annorum decurſu venerabili Præſuli Jenenſi* Johanni Majori *plethorico ſalutaris erat ſanguinis per venam ſectam miſſio. Neque ingraves cente ætate ab ea erat alienus. Attingebat annum* 89. *ſenili confectus maraſmo.* Out of which 'tis evident, that whatſoever the *German* practiſe be in Diſeaſes, 'tis not their *Reaſon*, but *ſuperſtition* and *imaginary fear* that makes them to decline to bleed therein: Nor do I find the relations of *M. N.* to be conſonant to the uſage of the *German* Phyſicians, except you will judge of them by the adherents of *Helmont* and *Paracelſus*. I might except againſt *Thonerus*, that in his *Appendix* he profeſſeth that he doth not abſolutely reject *Phlebotomy* even in *malignant Feavers*: and as good, if not a better *Phyſician* than he doth give this account, in oppoſition to him: "*Experientia teſtatur quod non ſolum in* Febribus his, *ſed & in* Variolis & Morbillis, *venæſectio in initio adhibita cor humoribus non repleat, ſed roboret, ut expellere poſſit ſufficienter* variolas, Morbillos & Petechias.

Rolfinc. method. medic. ſpecial. l. 4. ſect. 2. cap. 5.

Io. Dan. Horſtius obſ. & epiſt. ep. x. p. 54.

But I find my ſelf to exceed the bounds of a *Letter*; but I hope you will pardon the *length* of it, ſince it was an effect of my compliance with *your deſires*: and if I have not *fully* anſwered *them*, nor *poliſhed* my Diſcourſes as they might otherwiſe have been, be pleaſed to conſider the *ſhortneſs of the time* allotted unto me, the great *diſtraction* with which I write,

write, and the *multiplicity of controverſities* I have intreated on, and the *multitude of books* which I found my ſelf obliged to *conſult*, and *tranſcribe paſſages* out of; and then I doubt not but I ſhall obtain your pardon, whereunto that I may have the more colourable title, I avow my ſelf to be

Warwick April 3 1671

Your moſt humble and devoted Servant

Henry Stubbe.

Paſſages

Paſſages to be added.

WHere I ſpeak concerning *Peſts*, that though agree in the ſame *Generical Nature* for the *moſt part*, yet do they *ſeldome* or never appear to be of the ſame *ſpecies*, ſo as to be cured by the *ſame Method* and *Medicaments:* becauſe I find ſome ſo *ignorant* as to ſcruple thereat, I add here the teſtimony of *Felix Platerus* the renowned *Phyſician* of *Baſil*, who lived amidſt *ſeven* Plagues.

Felix Platerus prax. t. 2. p. 69. de febr. cauſis.

" *Venenum peſtilens ejuſdem naturæ minime eſſe, ſed*
" *diverſæ, effectus illius tantopere differentes, qui corporis*
" *affecti conſtitutionis ſolius cauſa, non ſic variare poſſent,*
" *oſtendunt. Cum aliqua regeret peſtis, quæ ſine diſcri-*
" *mine in omnes vel pleroſque ſæviat: alia vero paucos*
" *tantum invadat: alia quæ quotquot tetigerit, interfici-*
" *at, magnamque ſtragem edat: alia, qua correptorum*
" *multi ſanantur: verum quidnam in veneno latens illi-*
" *us varietatis cauſa ſit, atque unde proficiſcatur, uti &*
" *in cæteris venenis, deſcribi minime poteſt.*

The ſame is averred by *Joſeph de Medicis* a *Candiot*, who had ſeen many *Plagues* in *Greece* and *Turky*, in *Ægypt* and *Paleſtine*, in *Tartary*, *Valachia*, *Tranſylvania*, *Ruſſia*, *Poland*, *Lithuania*, *Pruſſia*, *Denmark*, *Saxony*, *Holland*, *Germany*, *Bohemia*, &c. and never declined to viſit the *ſick*.

Joseph de Medicis Cretensis inter opera *Gregorii Horstii* t. 2. l. 1. de febribus, pag. 46.

" *Secundum, Assero unamquamque pestem vel morbum pestilentem, propriam habere naturam & peculiaria accidentia concomitantia vel inseparabilia, neque ejusdem speciei esse omnes pestilentes morbos, ut etiam plures & diversæ sunt species venenorum.*

" *Tertium, Ut unumquodque venenorum, vel assumptum vel injectum, vel admotum propria sequuntur accidentia (symptomata supervenientia Medici appellant) & proinde peculiaria requirit antidota & alexipharmaca; ita unamquamque pestem habere propria symptomata, & proinde indigere propriis præsidiis: quod Axioma non advertentes vulgares & triobolares Medici, eandam herbam v. gr. Tormentillam vel* Scorzoneram, *quam quondam aliquis in bello Trojano longe alia peste affectus cum utilitate adhibuerat, tanquam Catholicum Alexipharmacum, ac si esset Theriaca, in omni cujuscunque generis, regionis, & sæculi peste, indiscriminatim, omni ætati, & sexui approbant, exhibent & cum magno vitæ discrimine usurpant.*

The *same Author* in that most excellent discourse of his, (which contains the result of those thoughts which forty years practise had created in him) asserts *Phlebotomy* in the *Plague*, *Spotted Feaver*, and *Small Pox*: and concludes his discourse with this Relation,

Ibid. pag. 57.

" *Unicam Historiolam placet hic afferre, quod mihi ipsi evenit* ἀπομνήμαι & χάριν *breviter narrare. Anno 1629. Amstelodami (ubi aliquot annos publica stipe altus vitam transegi) pestis grassabatur, primo quidem solos in pauperes & egenos lacte & caseo victitantes, sed postea:*

c *poſtea Autumni tempore enormiter ferociebat, & ple-*
c *bem & patritios indifferenter invadebat ſæviſſimeque*
c *depopulabatur, adeo ut ſingulis diebus trecenti vel qua-*
c *dringenti deficerent: Nemo mihi nec aliis phlebotomi-*
c *am conſulentibus annuebat (erant vero tunc temporis ibi*
c *magni nominis Medici ex natione Luſitana, præſertim*
c *Zacutus vir eruditione inſigniſſimus, & multa experien-*
c *tia clarus) ſic miſere multa hominum millia peribant:*
c *ſunt enim Belgæ omnes natura αἱμοφόβοι, i. e. ſanguinem*
c *mittendi timidi tanto magis tempore peſtis, in quo ipſi*
c *ſuæ gentis Medici phlebotomiam deteſtabantur; ali-*
c *quibus ſanguis e naribus ubertim fluens plurimum con-*
c *ferebat, ut etiam bubones erumpentes in emunctoriis co-*
c *pioſam ſaniem eructantes, abſque periculo infirmos eſſe,*
c *declarabant. Plurimis in gutture fiebant inflammatio-*
c *nes, quibus neque venarum ſectio ſub lingua, neque gar-*
cc *garizationes vel cataplaſmata ullum emolumentum affe-*
c *rebant, ante enim maturationem ſtrangulabantur. Ego*
c *vero cum eadem lue me graviter oppreſſum & improba*
c *angina fere enecatum viderem, quod mihi fuit vere no-*
c *vum & inopinabile, cum nunquam peſte fuerim infe-*
c *ctus, etſi audenter eadem lue infectos ſemper viſitaverim,*
c *ſed incolumen me conſervaverim, tertio vel quarto die*
c *(tentaveram prius multa media & præſidia an poſſem a*
c *tanto malo liberari) juſſi venam medianam dextri cu-*
c *biti mihi ſecari, & ſanguinis ſeſquilibram mitti, a*
c *qua cum nihil detrimenti, vel virium languorem perce-*
c *piſſem, (quamvis neque etiam morbi remiſſionem) ſe-*
c *quenti die tantundem ex altero brachio exhauriri impe-*
c *ritavi: quæ ſolo præſidio, dei non abnuente, totam vi-*
c *rulentiam e corpore emiſi, & breviter me a tetrica peſte*
c *expediri, atque hoſtem jugulum petentem, plumbeo*
c *(ut aiunt) gladio jugulavi: quod ſalutare Medica-*
c *mentum plurimi poſtea adhibentes atque mea veſtigia*
c *ſequentes, ſcilicet ſanguinis miſſionem celebrantes, ve-*
c *re e mortis faucibus erepti & vindicati ſunt.*

In the account of the Small Pox I omitted the opinion of *Franciſcus Oſwaldus Grembs*, a German *Phyſician* of good note, and great admirer of *Van Helmont*, who yet allows of *bleeding*, in ſome caſes, in the Small Pox. His words are theſe.

Fr. Oſwaldus Grembs: Arbor hominis integra & ruinoſa, l. 2. c. 3. de febr. malign.

‘‘ The danger of the Small Pox doth conſiſt in
‘ two caſes: Firſt, if Nature move the hot and vitious
‘ humors, and is not able through *debility*, or their *te-*
‘ *naciouſneſs*, or the *denſe habit* of the body, to expel
‘ them: and then the Diſeaſe becomes deadly, the hu-
‘ mours recurring upon the Heart and Vitals: Se-
‘ condly, if Nature do protrude them forth, and is not
‘ afterwards able to regulate them by reaſon of their
‘ *multitude*, or *malignity*, but that the Feaver becomes
‘ more *malignant* then at firſt, and either diſpatcheth
‘ the ſick, or deſtroyes ſome particular parts with a
‘ moſt fætid corruption therof. There are *four Indi-*
‘ *cations* for the cure of the Small Pox; The firſt is
‘ to evacuate what is redundant: The ſecond is to
‘ proſecute the emotions of Nature: The third is to
‘ reſtrain the venenateneſs of the Diſeaſe: The fourth
‘ is to ſecure ſome particular parts: And becauſe the
‘ *Feaver* which goes along with the *Small Pox* is a *Sy-*
‘ *nochus*, it requires Phlebotomy; here is no room
‘ for *purging*. In Children *Scarification* in the Armes,
‘ calf of the Leg, and Noſtrils, or *Horſe-leeches* applyed
‘ to the Back, Breech, or Thighs, may be uſed inſtead of
‘ *venæſection*, when the *Small Pox* do not come forth.
‘ If the Pox do come forth kindly in the beginning,
‘ none of theſe things are to be practiſed. In grown
‘ people a *minute Phlebotomy* is to be practiſed after the
‘ firſt or ſecond day only, when the Humors are protru-
‘ ded, ’tis dangerous (for it draws in the Humours)
‘ except

'except ſome new accident, as a *Pleuriſie*, does render
'it neceſſary. When they are coming forth Nature is
'to be aided with *Frictions*, and Alexipharmacal Cor-
'dials, as *Bezoar*, *Unicorns-horn*, *Electuarium de Gem-*
'*mis*, &c. ———

'A noble Lady of the age of fourteen years fell ſick,
'and bled at the Noſe, ſhe had a nauſeouſneſs at Sto-
'mach, and great pains in her back: the Phyſicians be-
'ing ſent for, a Clyſter was propoſed of Broth with
'Caſſia, it came away without any operation: her
'pains and Feaver increaſed, and certain ſpots appear-
'ed behind her Ears, which portended the *Small Pox*:
'one of the Phyſicians commended *blood letting*, as
'the moſt ſuitable remedy for a great diſeaſe, and not
'inconſiſtent with her years and ſtrength, eſpecially
'ſince ſhe was plethorical; hereby, he ſaid, the *blood*
'being diminiſhed, the veſſels would be leſs diſtended,
'the malignity repreſſed, and pains mitigated: But ſo
'it happens frequently, that we cannot embrace the
'moſt obvious counſils, whether it be an imbecillity in
'our minds, which being diſtracted betwixt hope and
'fear, and ſollicitous about the future, forgets the pre-
'ſent urgency: or whether it be the method of Pro-
'vidence, which to effect its deſigns tranſports us be-
'ſides our ſelves: The reſt of the Phyſicians ſeemed
'aſtoniſhed at the propoſal, and neither aſſenting, nor
'diſſenting, proceeded only to inſinuate the peril of
'that operation: But, that they might ſeem to do
'ſomething, they propoſed an anodyne Fomentation
'to mitigate her pains, which having continued ten
'hours, produced no benefit: The enſuing night ſhe
'was very reſtleſs, and on the morning her ſtrength be-
'gan to be ſenſibly impaired: thereat the Phyſicians
'were much troubled, and conſidering the preſent
'exigency, they gave her a Cordial of *Bezoar* and the
'*ſpecies de Hyacintho*: it was not given ſooner,
'becauſe there was amongſt the number one who

was

'was extreamly averſe from giving any Cordials in the
'*Small Pox*, to bring them forth, as if thereby the hu-
'mours were exaſperated, the ebullition rendered too
'violent, and the Puſtules protruded in ſo great an
'exceſs as to ſtrangle the Patient, he ſaid that Nature
'underſtood her own work, and could do it beſt, that
'ſhe was to be left to her ſelf, and needed no incen-
'tives: And by theſe ſuggeſtions he intrigrued the
'determinations of the Phyſicians, ſo as that no *Cor-*
'*dial* or Alexipharmacon was given ſooner. The Pa-
'tient having taken ſome of the aforeſaid *Cordial*, and
'afterwards avoided a *great deal of blood* by Urine:
'which yet ſome ſuſpected to be a *Menſtruous* excre-
'tion: a little after ſhe vomited up a *great deal of*
'*blood:* this ſame took to be a *Critical* effort of Na-
'ture, which had alleviated the violent ebullition of
'the blood in the greater veſſels by diſcharging a part
'thereof at the Mouth and ordinary paſſages: in the
'mean ſpace, the *malignity* of the Diſeaſe prevailed
'above the ſtrength of Nature, the *whole maſs of blood*
'being vitiated, and 'twas a miſerable ſight to behold
'the poor Lady as it were *drowned in her own blood*, and
'thus deſtroyed: all her back was full of large *livid*
'*ſetlings of blood*, as if ſhe had been bruiſed or whip-
'ped with cords; and being dead her body was open-
'ed on the ſame day, all her Bowels were ſound, the
'*Liver* in no default, only the Lungs were blackiſh
'through the aduſtion of the blood in the Diſeaſe.
'And now the Phyſicians quarrelled one with ano-
'ther; one blamed the *Clyſter*, which impeded the
'courſe of Nature, and retracted the humours in-
'wards, whoſe tendency was to the habit of the bo-
'dy: Others cenſured the Fomentation, which though
'*anodyne*, might cloſe the *Pores*, and give occaſion to
'the *bloody urine*, by repercuſſion of the puſtulary
'matter. Thus one Phyſician inveighed againſt the
'errors of the reſt; whileſt indeed *all of them ought*
'*privately*

Grembs doth there defend the uſe of *Clyſters* by *practical hiſtories*: and ſo doth *Augenius* and many others: and I have known them uſed without any peril.

c *privately to confess, that* their great failour was in
c omitting Phlebotomy, and that this was the
c cause of her death. Thus Physicians oftentimes
c occasion the death of their Patients, by not doing
c *what they should*, and not only by *over-acting*: this
c last is the default of those who attend on the sick,
c and first try their own *pretended Experiments*, then
c have recourse to the *receipts* of the *populace*, or pre-
c scriptions of some *practising Ladies*, and thus by *do-*
c *ing what they ought not*, they most officiously kill the
c sick, and prevent the seasonable advise of *wise Physi-*
c *cians*, who ought to have been consulted at first.
c These kind of persons are in as much default as those
c *timorous* and *cautelous* Doctors, who dare not admi-
c nister those Remedies which are necessary in *acute*
c *diseases*, but by neglecting their Patients, suffer the
c Disease to prevail over the vital faculties, and kill the
c infirm.

Thus far the *Helmontian*, but (to give him his due) judicious Practitioner: and I recommend this case to the Abettors of Doctor *Whitaker* and Doctor *Sydenham*: since there appears upon *dissection* that the *Small Pox* had not fixed themselves *within*, but that a meer *surcharge of the mass of blood* (either *natural*, or *contracted* from the *attenuation of the ebullient blood*) was the cause of her decease.

I forgot in the conclusion of what I writ of the Small Pox, to speak about *Bathing of the hands in the* Small Pox, the practise whereof Doctor *Whitaker* represents, as having been fatal to the *Princess Royal*. His words are, "I observe *Riverius* above pag. 60, 61.
c all other Authors to ordain the bathings of the
c hands and feet, by reason of the density of those parts,
c in some more dense than others, as in Smiths, Carpen-
c ters, and Foot-posts, whose hands and feet are harder

than

'than perſons of a more tender and ſedentary Trade
'or Profeſſion. I cannot but acknowledge that hu-
'mectation, and attenuation to mollifie thoſe parts, is
'properly indicated; but the *mode* of this application
'is obſervable, becauſe upon the opening of the poro-
'ſities by bathing, the ambient air may obtain the ad-
'vantage of repelling the morbifical matter from thoſe
'ignoble and extream parts to the more noble, by the
'ambient air in the courſe of ſanguineous circulation;
'and hath proved fatal in ſuch as have rare and ten-
'der ſkins, as is proved by the bathing the Illuſtrious
'*Princeſs Royal.*——Concerning that *Princeſs* how
ſhe was ordered, and at *what time* of the Diſeaſe *ba-
thed thus*, I know not: but 'tis an *equitable preſumpti-
on* that in *ſo important a caſe* ſo underſtanding *Phyſi-
cians* as ſhe employed, did nothing raſhly, or *without
reaſon.* I find in the relation of her being diſſected
cauſes enough of her death, without imputing *it* to this
uſage: her *Omentum* was putrified, and much *inflamed*
towards the Spleen ſide: her *ſpleen* was flaccid, and
ſemi putrid: her *Stomach* was *inflamed*, and on the in-
ſide beſet with *Aphthæ*: her *Liver* ſpotted, and in-
flamed even to a *Gangrene* almoſt: her *Lungs* in a
manner rotten, and repleniſhed with black blood,
ſpotted and puſtulated in the *ſuperficies*, the *Paren-
chyma* of her heart was much conſumed. But had
not theſe things been, nothing is more certain, than
that of Petronius. *Quod non expectas ex tranſverſo
fit, et ſuper nos negotium Fortuna curat.* But that *Ri-
verius* doth preſcribe this Bathing above all Au-
thors, is a *manifeſt falſity*. His words are only theſe:

Th. Bartholin. ep. medic. cent. 3. ep 29.

Laz. Riverius prax. medic. l. 13. c 2.

'' *Ac primum in eruptione Variolarum, aut dum matu-
'reſcere incipiunt, ingens dolor vel pruritus interdum
'ægrotantes affligit; præſertim vero in plantis manuum
'et pedum, eo quod denſior in iis partibus cutis eruptio-
'nem prohibeat. Cui ſymptomati medeberis, ſi partes
'illas decocto emolliente diutius foveas, vel in aqua calida
'detineas.*

detineas. I ſhall compare herewith the directions of *Horatius Augenius*, whoſe character I have already given.

He having prohibited the *bathing of the whole body*, doth add. *Sed non eſt eadem ratio in particulari balneo, cum ſcilicet partes aliquaſpiam extremas lavacro calido fovemus, ut ex illis duntaxat citius & facilius variolæ exeant, doloremque mitigemus, ut plurimum, ſatis inſignem*: hoc quidem prætermitti non debet. *Nam plerumque accidit, ut ex volis manuum & plantis pedum variolæ non erumpant, niſi cum maxima difficultate, et dolore: propterea expedit fovere eas partes aqua calida aliquando ſimplici, et aliquando ſimul decoquendo flores Camomillæ, aut Altheæ, aut violarum, vel aliud ejuſdem generis, quod fuerit ad manus. Hæcque antiqua extitit* Arabum *conſuetudo; nam* Rhaſes *ita ſcriptum reliquit:* lib de Peſtilentia, c. 8. Quod ſi in volis manuum expullulet, tu haſce ex oleo tepente, quo goſſypia imbuta ſint, multum refricato, & in calida aqua foveto. Verum ſi dolor non ſedetur, nec peſtis facile expellatur, tu ſeſamum perpurgatum ubi contuderis, & in lacte maceraveris, illico illinito, & in linteo per totam noctem alligato: dehinc ubi amoveris, & calente aqua foveris, rurſus illinito. Verum ſi velis, palmulus ubi contuderis, & in butyro maceraveris, vel in ſeſami fæce illinito: Siquidem hæc, & ſimilia, cutem remolliunt, faciuntque ut peſtis facile excernatur & dolores cedant. *Hæc Rhaſes. Quæ omnia judicantur mihi ſaluberrima in præſenti caſu, niſi quod abſtinerem ab oleo, quia facit ulcus ipſum ſordidiſſimum, ac ſanatu difficile.* Ego autem nullum inveni præſtantius remedium, quam fovere partes extremas manuum & pedum aqua tepida: *vel decoctione florum camomillæ & Altheæ. Quod ſi emollire adhuc magis voluerimus, decoquo ſimul ſemina fænugræci.*

Hor. Augen. de febr. l.x.c.x.

This Bathing is no leſs recommended unto our practiſe by the diligent and learned *Forreſtus*, who ſpeaking of an ancient Woman, (of fifty years old) which was ſick of a Malignant peſtilential Feaver, accompanied with the Meaſils, (that came out on the *ſixth* day) concludes the Obſervation thus: "*Huic tamen (quod fere jam omiſeram) ingens pru-*
'*ritus & punctio in plantis pedum ac volis manuum ade-*
'*rant; pro quo ſymptomate mitigando, quum maxime*
Forreſtus lib. 6 obſ. 42. '*eo & intolerabiliter affligeretur, ut ſe potius mori velle*
'*diceret, quam illum pruritum & punctionem ferre, juſſi*
'*ut pedes & manus continuo teneret* in aqua calida.
'*Quo conſilio pruritus tum puncto ceſſarunt, et melius per*
'*cutem in volis manuum et pedum morbilli emergebant.*
'*Hujus rei experimentum notatu dignum ab ipſo Aſtario*
'*Papienſi medico accepimus, quod etiam* Arcanum *a*
'*Nicolo Florentino medico ſui temporis inſigni mutuavit:*
'*cum idem ſic ſcribat cap.* de Variolis *et* Morbillis,
'*circa finem, de corrigendis accidentibus eorundem.* Si
'fuerit punctio plantæ pedum, aut palmæ manuum,
'ponantur dicta membra aſſidue in aqua calida: ut
'dicit Nicolus; & ego vidi multum conferre. *Hæc*
'*Blaſius Aſtarius Papienſis in libello ſuo* de curandis
'Febribus, *qui adjunctus eſt praxi Gatinariæ: quo*
'*quidem experimento ab hoc ſymptomate moleſto et gravi*
'*noſtra ægra liberata eſt, et brevi, Dei nutu, evaſit et in*
'*totum ſana facta eſt.*

Herewith agreeth the injunction of *Hoeferus*, which runs thus. "*Ubi* in variolis *plantæ pedum et ma-*
Hoeferus Hercul. medic. lib. 7. p. 366. edit. ult. '*nus, quod ſæpius fieri ſolet, gravi pruritu vexantur im-*
'*mitte membra in aquam calidam, quod pro ſecreto habet*
'*Forreſtus.*

I need not any more *Authors*: what hath been ſaid, is ſufficient to *juſtifie the practiſe* to any intelligent perſon, and to diſprove the *Aſſertion* of this *Doctor*; but

but as *that* is moſt *untrue*, ſo are the Reaſons he gives no leſs *vain*. Whereas *he* is pleaſed to think that there is no ſuch *denſity* in the *skin of the hands*, as is generally ſuppoſed, except in *laborious perſons*: 'tis certain that ſome have it ſo *naturally:* as *Scipio Naſcica*, who was therefore *in raillery* demanded by one, *If he uſed to walk upon his hands?* Moreover, though that which is called by Anatomiſts the *Cutis* be *thinner* in the *hands* and *feet* than in other parts of the body, yet is the *Cuticula* thicker there, and 'tis poſſible that even it may admit of a *latitude* in its *native denſity* and *poroſity* in *individuals*, ſince 'tis acknowledged and hath been obſerved, that ſome perſons have had a double *Cuticula*. It is alſo certain, that the *texture* of the *Cuticle* may be ſo changed, that thoſe humors which iſſued thereout by way of *inſenſible tranſpiration*, may be at ſome times *intercepted* and lodged in the *skin* and under the *Epidermis*: and if ſo, *Why may not that happen in a determinate part, which does happen univerſally?* In fine, 'tis frequently obſerved in *Scorbutics* and ſuch as are ſaid to have an *hot Liver*, that they feel a troubleſome *heat in the palms of their hands*, and *ſoles* of their feet, (notwithſtanding that otherwiſe they have *delicate* and *tender skins* or *bodies*) which introduceth a *dryneſs* in the *Cuticle* there: and *can there be dryneſs without a condenſation of the Pores? or can there be ſuch an* heat, *without an obſtipation thereof?* And doth not ſuch a *condenſation*, *dryneſs* and *heat* indicate a befitting *relaxation* and *humectation?* How then cometh it that any man ſhould deny the *poſſibility* of the *Phænomenon* in the *Small Pox* (eſpecially ſince daily events make it *ſenſibly* manifeſt) or refuſe to practiſe what is indicated? I confeſs the old procedure of *England* is, to anoint with *unſalted Butter*, or to *bathe with Butter and Beer*; which is conformable to the documents of *Rhaſes:* But you ſee the practiſe of *France*, *Italy*, high and low *Germany*, doth warrant the

Petrus Lauremburg. Colleg. Anatom. diſp. 2, ſect. 14

P. Lauremberg. ubi ſupra, ſect. 13.

uſe of *warm water*. He further urgeth, that *upon the opening of the Pores by bathing thus, 'tis poſſible for the ambient Air to gain ſuch an advantage upon the ſick, as to repel the morbifick matter from theſe ignoble and extream parts to the more noble, in the courſe of the ſanguineous circulation.* But ſince *continual practiſe* doth manifeſt (as appears by the *Authors* cited) that this doth not *inevitably* nor *commonly* happen, *What is an effect of negligence in the Attendants, or unknown idioſyncraſy of Patients, doth neither diſparage the Phyſician, nor contra-indicate to the Remedy.*

And ſo much for Doctor *Whitaker*; to whom the *Engliſh* are obliged for his *good intentions* towards *them* in *that Treatiſe*: but not for *his performances*: 'tis his lateſt *Legacy* to his Countrey; but in *Legacies* it often falls out that the *Legatee* receives no other benefit by the gifts of a *Teſtator*, than that he is aſſured he *remembred* him, and had ſome *reſentments* for him.

where I ſay that *letting of blood* doth not, except *by Accident*, in *ſome perſons*, produce fatneſs: I do confirm my Aſſertion further by the Authority of *Epiphanius Ferdinandus*, who in his advice to an *Italian* Prince how to prevent *exceſſive Corpulency*, doth direct a *Phlebotomy*, and that to be *repeated* in both Armes. Neither do I remember any *Commentator* upon the *Aphoriſmes* of *Hippocrates*, who hath not directed *that courſe* for the *extenuating* of *Athletick* bodies. This is a caſe in which the *Germans* are reconciled with the *French* and *Italians*; and wherein *Proſper Alpinus* accords with *Franciſcus Silvius de le boe*: the former ſayes, that ſince *frequent* and *large eruptions of blood* do continue the Patients *lean*, or reduce them, that are otherwiſe *fat*, to *ſuch*

Epiph. Ferdinand. hiſtor. med. 82.

Holler. in ſect. 1. aph. 3. & *Liebaut.* Hier. *Thriver.* ibid. *Heurnius* ibid.

Proſper Alpin. med. method. l. 4. c. 19.

an

an habit; that even *Nature* ſeems to inſtruct an *Artiſt* ſo as to promote *ſuch like evacuations*. And the latter avows that *immoderate growth of the muſculous parts is to be prevented* (amongſt other acceſſional courſes) *by often bleeding*.

Fr. Silvius de boe pr. med. l. 1. c. 38.

I think there needeth not any more to be ſaid about the point: neither can it be juſtly doubted, but that if *Phlebotomy* had ſo uſually produced this effect of fatneſs, it would have been reduced into *obſervation* by *Phyſicians* before 1650.

A

Where I treat concerning *Phlebotomy* in the Small *Pox*, that it may be ſafely adminiſtred, even *after that they begin to appear*: It is juſtified by a multitude of *Examples*, one whereof lately was Sr. *W. Roberts*, aged above forty years (as I am moſt credibly informed) they did not come forth *kindly*, but *moſt perillous ſymtoms* did multiply upon him, ſo that his condition ſeemed *deſperate*; yet upon the adminiſtration of this *generous Remedy*, their *eruption* was expedited, and all danger ceaſed, ſo that he recovered *with eaſe*. And at *New Colledge* in *Oxford*, in the year 1660. (or 1661. I remember not well the year) the *Small Pox* raged with much *malignity*, and proved *mortal* to many; but it was aparent that *few* (if *any* dyed) who were *let blood*; whereas on the contrary, thoſe *that were not Phlebotomiſed died all*, (or *generally*) *deceaſe*: This I was aſſured of by more then one, who were then preſent; though not being *Phyſicians*, they could not inform me of other *particular Circumſtances*.

Concerning *Phlebotomy* in general, there is one Objection againſt it, that I think I ought to take notice of, ſince it proceeds Originally from ſome *Virtuoſi*: And though *one* that hath urged it, be moſt groſly miſtaken in his aſſertion that the *Turks* uſe no *Phlebotomy*, the contrary whereunto is not only evident out of *Proſper Alpinus*, but is confirmed unto me by the obſervation of my intelligent friend Mr. *Denton* of Q. Colledge in *Oxford* (nothing being more frequent at *Conſtantinople* then to *bleed* upon every ſmall occaſion, and every *Barber* there being a *Phlebotomiſt*) yet I believe that in *China* and *Japan* the *Natives* do not practiſe *Phlebotomy* though the *Europeans* there do: Notwithſtanding *this*, I do not apprehend the force of the Objection as 'tis managed againſt *Plebotomy*, nor can I commend *their judgement* who from *thoſe Preſidents* (which indeed are but one Authority, the *Japoneſe* being no other then a *Chinaſe-Collony* (would put *us* upon an Eſſay of practiſing without *Vene ſection*. Eor, the difference of *particlar Countries* and *Nations* (ariſing either from their *Temperament*, *Diet*, and *Efficacious Medicaments* and *Method of Curing*) as to render *Phlebotomy*

* *Place this after folio* 257.

Phlebotomy uſeleſs or dangerous *there*; whereas in *other places* there *may be* (nay 'tis certain is) a *neceſſity* for a *different procedure*. I have already remarqued that at *Montpelier*, there is a greater *repugnancy* unto, and danger of *Phebotomy*; then at *Paris*: And the Preſidents of the *one Province* doth not oblige the *others*: And though it be true that as in *China*, ſo in *Languidock*, Phyſick is in a good condition, yet doth it not follow that therefore it is in a *bad condition* in the other parts of *France*, *Spain*, or *Italy*, &c. 'Tis no leſs certain that in *hot Countries* (as well as here in *Summer* and *Winter*) the *method of carrying* varies from what *is to be practiſed in colder Climates*: And as wounds in the *Head* and *Leggs* are in ſome places cured with much more *eaſie Medicaments* then elſe where: So 'tis no leſs manifeſt that 'tis *irrational* to conclude from the *facility* of thoſe Cures in the *places aforeſaid*, that thoſe are *impertinent* and *miſtaken*, who in other *Regions* proceed by a more *tedious*, *circumſpect*, and *vexatious Method*. Againſt that ſingle *inſtance* 'tis almoſt the *voice of Nature* which *we* alledge: and ſince the *learned* and *Barbarous*, *Europe*, *Aſia*, *Africa*, and *America* (where no *Combination* or *Traditional Doctrine* derived from *one* to the *others* can be ſuppoſed) do concur to juſtifie the practiſe of *Phlebotomy* againſt the Natives of *Japan* and *China*, let us reckon it amongſt *their ſingularities* (and founded upon *motives peculiar to them*) or amongſt thoſe *Errors* which *their affectation* or *ignorance* hath particularly involved *them* in. To conclude, ſince the *Miracles* of their *Cha* or *Te* do not appear to *us Practitioners* in *Europe* to be *true*; though the uſe thereof be ſo ſucceſful *there*; the cauſe *thereof* is to be aſcribed to Circumſtances of their *Climate*, and *way of living*, and *acceſſional Therapeutics*) ſo neither is there any argument from *their Omiſſion* of *Phlebotomy*, that *we* may omit it *here*; or that *we* ſhould dare to *imitate them*; but of *this* we may judge *better* when the *Virtuoſi* receive from the *Weſt-Indies* ſuch an exact account of *all Circumſtances* as may regulate a *Phyſician*.

The ſame Obſervation is made concerning *Rhubarb*, *China*-root, *Guyacum*, *Sarſa*-parilla, *Contrayerva*.

A RELATION OF THE Strange Symptomes Happening by the Bite of an ADDER, And the CURE thereof: IN A LETTER TO A Learned Physician.

By *H. S.* Physician at Warwick.

LONDON,
Printed in the Year 1671.

VIDE

TO THE READER.

ALthough the insolence *of some* pretenders to Experimental Knowledge *might discourage any* **Physician** *from contributing to the instruction of* **this Age**; *yet* I *have suffered my self to be prevailed upon so far as to publish* this discourse. I *might have enlarged upon it* several wayes, *and added besides some* Observations *upon* Adders, *the way of preparing* **Viper-Wine**, *and sundry* Cures *performed by* it, *and the prepared* flesh *thereof. But seeing that all* we *do of* that kind *doth but furnish a company of* arrogant *and* ignorant Experimentators *with subjects to oppose* us, *and undermine the* Faculty; *I am become inexorable as to that matter; and will*

not be in the leaſt inſtrumental *towards the laying on of thoſe* Fetters *which ſome men were* preparing, *not only for all* Artiſans, *but all* ingenuity *and* learning. *This* race *of men who had determined to* value *and* praiſe *none but* **themſelves,** *and extended their* Civilities *ſo far, that all their* mutual Elogies *do import no more than a* trade *of* ſmoak *and* ceremony, *may now abate of their* pride *and* cenſoriouſneſs, *and be ſatisfied that they are not* neceſſary to the World, *except one have an occaſion to ſend to the* Eaſt-Indies *to know what grows in* America, *or to* South-wales *for an account of* Nova Zembla, *or the Countries ſubject to the* North *and* South-pole: *If all* Hiſtory *and* Antiquity *be to be affronted moſt* impudently; *if* falſe Relations *concerning* Salt-peter, Cider, Birch-water, *&c. ſeem* requiſite: *If* Chimæras *be to be propoſed, or the* Education and Religion *of our* native Countrey *changed, there is ſome uſe for this* Aſſociation, *which conſidering their* Armes, Projects *and* Deportment, *alwayes puts me in mind of that* Poetical Fancy *deſcribed to be*

Πρόσθε λέων, ὄπιθεν δ' ὄφις, μέσση δ' χίμαιρα.

Had I written *according as* **they replyed,**

I

I could have confessed my self **mad**: *and less than a* **distracted Brain** *would never have chosen to desert* Aristotle *and* Quintilian *to imitate the fam'd* Impertinencies *of the Orator* Posthumus, *who being to plead a case about* three Goats *that were* stollen, *began an* Harangue *about* Sylla *and the* Mithridatick *Warre, and never touched upon the* main Controversie *any more then doth the illiterate* **Ecebolius**; *who what* He *designs I cannot tell by* flattering *Doctor* J. W. *and Mr.* R. B. *and terming an old* Parliament Officer (*who hath the* Canker *of* Presbytery, *and the* Conscience *of an* Olivarian; *and who knows nothing by* me, *a stranger to* him, *though he* hate *me for knowing* too much *by him*) *the* **Loyal** C. E. D. *And as great a* Riddle *is it, how this* Renegado-Presbyter *should dare to say, that* **there is not a Man born since 1936. less obnoxious to the Church and Government.** Letter p. 32.

Will the **generous Cavaliers** *endure this from a* **Rump-Chaplain**? *Who* confesseth *himself to have been a* Preacher *in those dayes, and never* **gave his Vote for Episcopacy** (*but preached against* Christmass-Pies) **till a year before the Kings coming in.** *Certainly he was a* **very Fool,** *who could be in* those dayes *so ignorant of the* Ibid.

controverted Points; *and 'twere an* intollerable extravagance *in any but a* Virtuoso *to write this* now. *But I shall call him to a* particular account *for all by the* next Term.

A RELATION Of the ſtrange SYMPTOMES Happening by the Bite of an ADDER.

Honoured Sir,

I Have at laſt finiſhed the cure of that Man who was ſo unfortunately bitten by an *Adder* here at *Warwick*, and becauſe of the *rarity* thereof, I ſhall ſatisfie your deſires in penning it.

Upon *May* the ſeventh, 1671. *Joſeph Denny* a poor Man in *Warwick* (uſually employed by me to catch *Adders*) walked out with his *Brother* to conduct him a part of his way homewards, and having gone about a Mile, he eſpied an *Adder* lying in the Sun, it being about ſix a clock in the morning: he was willing to ſhew his Brother the *curioſity* of catching *them*, and how *dexterous* he was thereat: and though he had neither

Glove

Glove nor *Tongs* with him (as not deſigning *that work* on *Sundayes*) he did notwithſtanding caſt himſelf near the *Adder*, and nimbly ſeiſing on her *Tail* threw her from her *Covert*, with ſuch *celerity* that ſhe could not *bite* him, and then haltered her with eaſe: A little after he eſpied another, but lodged in a place of more *difficult acceſs:* In this attempt, which is performed with ſo much agility, it was his misfortune to ſeiſe upon the *middle* of the *Adder*, and before he could *diſingage* his hand, ſhe bit him on the inner ſide of his *middle finger*, juſt upon the *middle joynt*; yet did he diſlodge her from the *Covert*, and took her. There appeared the impreſſion of the *two teeth*, (though I ſpeak as of a *female*, yet 'tis more than I know which it was, and uſually they are *males* which have *two teeth*) but the *pain* was no other than one would feel upon the *pricking of a pin*.

Being ſollicitous about his condition, he took leave of his Brother, and perceiving a *little blood* upon the wounded place, he *ſucked* that and the *virulency* (as he thought) out, and then ſpate it forth of his Mouth: then he waſhed the place affected with *cold water*, and finding the *tumour* and pain to increaſe (which was not ſuch as happeneth upon *inflammations*, but like that which precedeth a *Sphacelus*, and was accompanied with a ſenſe of benummedneſs) he haſtened home *unto me*, whom he knocked up before *ſeven a clock*, and having only time to ſignifie his condition, at the door, he ran to his own houſe, to enjoy the convenience of his *bed*, and the attendance of his *Wife*, who immediately repaired to me for directions; the whole Hand was extreamly *tumified*, and *black*, and the ſwelling began haſtily to dilate it ſelf towards the Elbow: He was ſeiſed with a *Vertigo*, *vomiting*, *ſwooning*, and a *cold ſweat*, the violence whereof

whereof was ſuch, that the drops trickled from his Head, as if his Hair had been wet with a *great Rain*, or *water*: where each *Tooth* had faſtened, there appeared a *blackiſh Puſtule*, or *Bliſter*; I appointed his Wife to make a ſtrong *Ligature* above the *tumour*, at his Elbow; and having clipped the *Bliſters*, to hold a red-hot Fire-ſhovel as near to the part affected as he could endure it, and to give him a good draught of *Viper-wine* preſently: At her return ſhe found her Huſband not in a condition to ſpeak intelligibly, his Tongue was ſwelled, and he faultered in his ſpeech, as thoſe do who have an *Hemiplegia* or *dead Palſie* in their *Tongues*: Upon the drinking of the *firſt draught* of the ſaid *Wine*, he vomited up abundance of bitter *Choler* mixed with *Phlegme*, coloured *yellow*, *green*, and *blew*; then ſhe gave him *another draught*, (at both times *half a pint* at leaſt) whereupon his *vomiting* and *ſwooning* ceaſed, and his *ſpeech* returned to him: The *Ligature* had put an happy ſtop to the *progreſs* of the *tumour*, but the *heated Fire-ſhovel* produced no effect at all, the *tumour* and *pains* ſtill *increaſing* betwixt the *wounded place* and the *Ligature*: By this time I had got on my clothes, and haſtened thither with a *Chirurgeon*: I found the man as *cold* as any *dead Coarſe*, and all over turned as *black* as a *Tawny-moor*, (though otherwiſe his *skin* was very *white*) and amidſt the blackneſs of his *hue*, there was a viſible mixture of *greeniſh-yellow*: I could not feel any *Pulſe* in either Arm, and he complained of a *palpitation of the Heart*: I cauſed *two Scarifications* to be made on each ſide of the Finger above the *joynt*, as deep as the *tumour* permitted, and four more to be made on the *back of the hand* in the like manner: and upon inciſion the *fleſh* did *cut* as if it had been of a dead body, there iſſuing neither *blood* nor any *ſerous liquor*, though he had his *feeling* there as entire as ever: I layed to the

places

places a Plaister of *Venice-treacle*, and gave him *inwardly* above *half an ounce* thereof in some *Viper-wine*: the operation whereof was not such as to beget any warmth in his *body*, or any *pulse*, or the least alteration in his *Arm*; whereupon I sent for some *Angelica-water* (being unwilling to give him more of the *Viper-wine*) and put into a draught thereof at least two drachms of *Mixtura simplex*, upon the taking whereof his *Pulse* returned immediately, and a warmth diffused it self all over his body, excepting the *affected Arm*, his cold sweats ceased, and a *red colour* came into his face, the *palpitation of his Heart* left him, and he became *chearful:* I repeated the dose, and caused *Fire-shovels* to be heated *five* or *six times* and held near the *scarified places*: hereupon he fell into a *great sweat* all over (except *that hand*) the affected part became *hot*, and the scarified places bled abundance of *florid blood*, which I suffered to flow *without any impediment:* where the Teeth had fastened there came forth as I took up the Plaister of *Treacle* two little pieces of *black flesh* of the bigness of a *great pins head*; and finding him in this hopeful condition, I went to Church, directing that he should not *sleep* (to which he was much inclined) and that there should be given him for food only some *Mace-beer*, with a little *Sage* and *Wormwood* boyled in it; and that he should take every half hour two or three spoonfuls of *Angelica-water*, with some *ten drops* of *Mixtura simplex*, and continue his *sweat*.

After *Sermon* I found him very chearful and well, no *pain* in his *Arm* but what seemed to proceed from the *Ligature:* whereupon I caused the Arm to be *unbound*, and washed with *Aqua vitæ*, and a new but gentle *Ligature* to be made *higher*, towards the Shoulder: and that he should continue the *Cordial*, and the Sores were dressed with a mixture of *Venice-treacle* and

and *Baſilicon*, and pieces of *Lint* dipped therein were put into the *holes*, whence the *mortified fleſh* had come forth.

After *Dinner* I found the man in the ſame condition wherein I had left him, only the tumour had diffuſed it ſelf to the *Shoulder* and *Arm-pit*, and ſent pains as far as his *right Breaſt*: He had of himſelf *two Stools*, in which there was nothing obſervable: I directed the taking of his *Cordial*, and at *night half an ounce of Venice-treacle*.

But in a few hours after, there being no conſiderable evacuation of matter, there was applyed to the Scarifications a Plaiſter of *Burgundy-pitch* and *ſimple Melilote*, equally mixed: whereupon there iſſued forth in good quantities a yellow ichorous matter, the *efflux* whereof was continued by the application of *Baſilicon* and *Venice-treacle*: where the *Bite* was, the Sore grew *foul*, and thereupon *that* was dreſſed with *Baſilicon* and *Ægyptiacum* mixed: And *thus* the Cure was proſecuted to the end, according to the diſcretion of the Chirurgion: only during the firſt and ſecond day, the *violent tumour* of the *Finger*, *Hand* and *Arm* continuing (notwithſtanding the evacuation by *Scarification*, and diffuſing it ſelf) I did give way to the applying of a *Pultice* to the *Arm* (from the *Wriſt* to the *Elbow*) made up of *Oatmeal*, *green Betony* ſhred, and *Milk*, to which was added in the end a little *Oyl of Roſes*, *Oyl of Mallows*, *Sheeps Suet*, and *Oyle of Spike*: the which *Pultice* had been tryed in *Warwick* upon the *like caſe*, when all the *diſcretion* of a knowing *Chirurgeon* could not ſecure the *like tumour* from an *imminent Gangrene*, the *pain* alſo dilating it ſelf, as in this caſe: and to the *tumour* on the *back of his hand* was applyed *green Wormwood* ſhred, and heated as *hot* as could be indured.

Being called out of Town, at my return the next day I found the *tumour* and *pain* much abated, the Man so well as to sit up, without any ill symptome, only he had made no *water* since the *Bite*: whereupon I appointed him to take once in two hours a drachm of *Sal Prunellæ* in his *Mace-ale*: and at the *first dose* he made much *water*, but it was of so deep a *red*, that his Wife imagined it to be *blood*: the next was *high-coloured*, but on the next morning I found its colour to be natural: The *tumour* on Tuesday being almost gone, and the pains every where vanishing, I appointed the *Chirurgeon* to keep the *scarifications* open, and to order them as common Sores, but to continue to the *bitten place* (both *holes* being run into one) the *Basilicon* and *Treacle*: and being willing to preserve my *Venice-treacle*, I appointed he should take a *Clove* or *two* of *Garlick* every morning: which, howsoever it be commended in *this case*, did produce such a pain in the *Sore*, that I was forced to alter it for some *Mithridate*, to be taken every *night* and *morning*: The same week he was so well as to take me (but with more caution) twenty Adders: and now, after three weeks time, the Sores are all well, and not any *tumour* remains, he being purged only, in the conclusion, with the decoction of *Damask-Roses*.

Vide *Santem Ardoynum* de venenis l. 6. c. 1. p. 335, 336 ex *Serapione*. Fortius juvamentum est in comestione alliorum, est enim curatio fortis valde.

But after a few dayes a *new* and *strange Symptome* appeared, all his *Back*, *Breast* and *Belly* became spotted with *yellow spots* (of different Figures) resembling exactly the *colour* and bigness of those of the *Adder* which bit him: the rest of his *skin* being *white*: and this continued from about the *fourth day* till now, with this discregancy, that in process of time from *yellow* they turned *brown*, and so by little and little disappeared: some remains thereof are still visible; but he is perfectly *well*, (excepting a sense of

of *benummedneſs* in *that* and the two ſubſequent *Fingers*, which ſeems to ſhoot from the head of the *radius* at his *Elbow*) and hath been on *mowing* ſeveral times; and is more *corpulent* than ever before: And that part of the Skin on his Back, Breaſt and Belly, which was ſo ſpotted, now peels off, and a whiter one ſucceeds in its place.

Having given you this account of the *Accident* and its *Cure*, I ſhall add ſome remarks thereupon.

It may perhaps be expected that I ſhould have applyed the *Head of the Viper* unto the *wounded place*, or ſome *ſliced Pigeons* or *Chickens*: but the *Accident* being proceeded ſo far, I durſt not adventure the *Patients life* upon ſuch *Remedies*, as if they proved *ineffectual* might fruſtrate the uſe of other more *generous Medicaments*.

The uſe of the heated *Fire-ſhovel* you ſee anſwer'd not thoſe praiſes which Mr. *R. B.* honours it with: as little doth Mr. *Charas* attribute thereunto, in the cure of that unfortunate Gentleman whom *He* recovered. I add, that the Remedy is older in *England* than Mr. *R. B.* and *his Friends*: I have read in ſundry ancient *Receipts* both *Printed* and *Manuſcript*, where for the *ſting* of a *Waſp*, *Hornet*, *Bee*, or *Adder*, the application a *Coulter* red hot, as near to the affected place as poſſible, is adviſed: and certainly the efficacy of the *heated Coulter* muſt be greater by reaſon of the *intenſeneſs of the heat*, then his *thin Knife* or *Spatula* can promiſe. Let us hence learn, that though the *Virtuoſi* do write, yet do not we improve alwayes in *uſeful Knowledge*: and if at any time the *Medicaments* of the *Ancients* do fail our *expectation*; thoſe of the *Moderns* (I wiſh they would not upbraid

Mr. *R. B's.* uſefulneſs of Experimental Philoſophy, part. 2. p. 49, 50.
Mr. *Charas* of Vipers, c. 8.

us with old Remedies) lye under the *ſame uncertainties.*

I did not *cauteriſe* the place that was wounded, becauſe it was ſo near the *ligaments* and *nerveous* parts; beſides, I had no great opinion of its ſucceſsfulneſs, for the venome having diffuſed it ſelf ſo far, could receive no ſtop by ſuch a *cautery*: I add, that when *Baccius* had ſo *cauteriſed* his Apothecary, who was bit in the Thumb, and that within half an hour after the *bite*, notwithſtanding *that*, he fell into moſt *virulent vomitings*, and other dangerous ſymptomes, and had in all likelihood died, had not he been carefully attended and followed with Antidotes forty dayes: Whatſoever is ſaid of ſuch *cauteriſing*, it *ſtrengthens* the part, hinders *afflux* of humours, and their *efflux* alſo, whereby the *venome* is continued in the Body; but 'tis our *intention* to evacuate it by the place *bitten*, as every man knows.

Andr. Baccius de venenis, pag. 16.

In the *Cure* it is obſervable, that the Man principally attributes his recovery to the *Viper-wine*; though I much doubt whether it would have been ſo effectual, had I not unceſſantly adminiſtred untohim the *Mixtura ſimpla*, or until I threw him into a *ſweat*. However you ſee that there is no ſuch abſolute neceſſity of the *Volatile Salt of Vipers*, that Mr *Charas* ſo much magnifies: my *Cure* was more *expedite* by much than his, though the Wound were more *dangerous*: and he acteth the *Virtuoſo*, not only in ſtealing that preparation of the *Salt of Vipers* from the candid and learned *Zwelfer*, and never mentioning him, but in *boaſting* ſo much of a Remedy which the *Galeniſts* may want without any prejudice, and which in many caſes I have found far inferiour to *Viper-wine*, and of no other effect than what you may expect from the

Vide *Zwelfer* in pharmacop. Auguſt. in notis ad Sal. Theriacal.

Volatile

Volatile Salt of Harts-horn fixed in the like manner.

As to the *Symptomes* which befell this man, moſt of them are taken notice of by ſeveral Authors, though all that are *bitten* do not ſuffer all the ſame *Accidents*: the *idioſyncraſy* and *anger* in the *Adder*, and the *divers conſtitutions* and *apprehenſions* of the Patients creating ſuch *variety of Accidents:* but in many things did our *caſe differ* from what is related by *any one Phyſician*, as you may ſee in *Sennertus*, and *Santes Ardoynus*, *Paræus*, and Doctor *Read*. The riſing of the *black Puſtules*, and the *ſtoppage of Urine* ſeems to be deſigned by *Sennertus* and *Santes Ardoynus* by their *Difficultas Urinæ*. But how far it was from any *inflammation* (which ſome ſpeak of) you may judge by my *Relation*, which favoureth the Opinion of *Galen*, *Meſve*, and *Aaron*, that the *poyſon* of Vipers is *cold*.

Santes Ardoyn. de venenis, lib. 6. c. 1.

Upon his ſucking of the *Wound*, and the evil conſequents thereof, it is obſervable how unſafe that direction of *C. Celſus* (*Veſalius*, *Forreſtus* and others) is, who adviſe that a *man ſhould ſuck the bitten place*. In *Amatus Luſitanus* you will find a relation of one who *dyed* by ſucking of the place bitten by a *Viper*: The ſame is avowed by *Matthiolus*, as *Paræus* recordeth the *Story* out of him, and inſtanceth further in a *Patient* of his own, who was much endangered by by *ſucking*, upon the bite of an *Adder*. It is alſo diſliked by *Epiphanius Ferdinandus*.

C. Celſus medic. l. 5. c. 27. *Veſal.* chirurg. mag. l. 3. c. 14. *Amat Luſit.* cent. 3 cur. 14. *Ambr. Paræus* chirurg. l. 20. c. 16, 24. *Epiphan. Ferdinand.* caſ. medic. 81.

I forgot to tell you one *Accident*, and that was on the *third day*, when he was taken with ſo great a pain in the bottom of his Belly towards the *Perinæum*, that he (to uſe his own expreſſions) ſeemed to

to be torn in pieces thereabouts: of which *symptome* I have not read any thing, unleſs it be that amongſt the conſequents of ſuch *Bites* the great *Paræus* doth ſay, that *Torſions in the Bowels do by fits afflict the Patient.* But this happened after that he *made water* freely, and without any *pain* but what he felt by way of debility in the *Muſcles* ſubſervient to that evacuation.

Tormina ex intervallis excruciant. *Paræus* chirurg. l. 20. c. 16.

I might proſecute the Diſcourſe ſo as to diſcourſe about the *venome* of the *Adder*, wherein it conſiſts: but much hath been ſaid on that *Point* by *Zwelfer* (out of whom *Charas* doth ſteal much of his Book) and others.

That a *Viper* is not poyſon, when *drowned* and *putrified* (if I may ſo call it) in Wine, appears by the Relations of *Galen*: And *Proſper Alpinus* ſaith the ſame of thoſe *Snakes* which the *Italians* call *Anzas*: and daily experience ſheweth the truth thereof; nor do I believe that any ever reaped any inconvence from *Viper-wine* made in that manner, except it were *by accident*, though for ſome Reaſons I do not follow *that way*. I have drunk of the *Wine* made ſo, even when I have *angred* the *Adder* before I put it in. I have taſted the *Gall* and that *yellow juyce* which lyes about the *Teeth*, without any hurt: the *yellow juyce* did to me ſeem *inſipid*, or a little *ſweetiſh*, if it might be ſaid to have any *taſte*: Mr. *Charas* ſayes he found the taſte of a *Salvia* or Spittle ſufficiently flat, and approaching enough to the taſte of *Oyl of ſweet Almonds*, in the *yellow liquor* of the Gums. Herewith agree *Amatus Luſitanus*: though *Zacchias* ſay that his Apothecary taſting thereof found it to be *Saporis inſipidi cum ponticitate*: And it ſeems to me indubitable, that the *venome* of the Animal proceeds from its *indignation*:

Galen. de ſimpl. l. 10. *Proſper Alpin.* med. meth. l. 4 c. 4.

Mr. *Charas* of Vipers, ſect 8.

Zacchias qu. medico leg. l. 2. tit. 2. qu. 7. ſect. 10.

dignation: (which opinion *Poterius*, *Helmont*, and *Zwelfer* propoſed before *Charas*) and that there is a *virulency* in the Wound appears by the *evil accidents* upon *ſucking* thereof: Yet muſt I note, that *Veſlingius* ſaith of the *Teeth*, that the *poyſon* doth *formally* lodge there, and that the *Teeth* being taken and rubbed upon any Weapon do give it an *impoyſoning quality*, if any be wounded with it.

But I ſhall detain you no longer, though I could ſhew ſome defaults in *Charas*, and illuſtrate the Hiſtory of Adders, by Obſervations upon the ſeveral Animals into which I have ſuffered the Skins and Livers to putrifie: But I ſhall conclude with the profeſſion of being,

Warwick June 12. 1671

SIR,

Your moſt humble Servant

Henry Stubbe.

FINIS